ADEMD4B Series Net DVR
User Manual

Model: ADEMD4B000TV

ADEMD4B000TVS

V.1.0

Index

Chapter1 Product Introduction 7
1.1 Summary 7
1.2 Features 7
Chapter2 Installation 10
2.1 Check DVR and It's Accessories 10
2.2 HDD Installation 10
2.3 DVR Rear Panel 12
2.4 External Alarm In/Out Connection 13
Chapter3 Operational Instructions 14
3.1 DVR Front Panel 14
3.2 Remote Controller 16
3.3 OSD Menu Description 18
3.3.1 Main Menu Items 18
3.3.2 Menu Operation 19
3.4 Character Input 21
Chapter4 Basic Operation Guide 22
4.1 Power on 22
4.2 Live Preview 22
4.3 Login 24
4.4 PTZ Control 24
4.5 Manual Record 26
4.6 Playback 27
4.7 Backup Recorded Files 30
4.8 Turn off DVR 31
4.9 Video spot output 32
Chapter5 Advanced Operation Guide 33
5.1 User Management 34
5.1.1 Add User 35
5.1.2 Delete User 36
5.1.3 Password Modification 37
5.1.4 User Rights 38
5.2 Device ID 40
5.3 Video Format and VGA Resolution 40
5.4 Date and Time Setup 41
5.4.1 Date and Time Setting 41
5.4.2 Date and Time Display Mode 42
5.4.3 Daylight Saving Time Setup 43
5.5 Camera Setting 43
5.5.1 Camera Title 43
5.5.2 Video Parameters Setup 45
5.6 Mask Area Setup 45
5.7 View Tampering Alarm 47
5.7.1 Enable Tamper Alarm 47

5.7.2 Select tampering area....48
5.7.3 Alarm handling....48
5.7.4 Temple Alarm schedule....49
5.8 Video Loss Alarm....50
5.9 Motion Detection Alarm....52
5.10 Live View Setup....55
5.11 Recording Setup....56
5.12 Alarm I/O Setup....60
5.13 Network Setup....63
5.13.1 Network Basic Settings....64
5.13.2 Network Advanced Settings....65
5.13.3 DHCP Function....65
5.13.4 PPPoE Function....66
5.13.5 IP Server Solution for DHCP....66
5.14 PTZ Setup....67
5.14.1 Typical PTZ Connection....67
5.14.2 PTZ Settings....68
5.14.3 PTZ Control....70
5.14.4 Preset Setup....70
5.14.5 Sequence Setup....71
5.14.6 Pattern Setup....73
5.15 Exceptions Setup....74
Chapter6 Utilities....75
6.1 Restore Parameters....75
6.2 Hard Disk Management....77
6.3 Clear Alarm Out....77
6.4 Reboot....77
6.5 Power Off....77
6.6 View Log....78
6.7 System Information....78
Chapter7 Firmware Upgrade....79
7.1 Upgrade from USB Flash....79
7.2 Upgrade from FTP Server....79
7.2.1 FTP Server Setup....79
7.2.2 Use DVR FTP Upgrade Function....81
7.3 Use Client Software to Upgrade....83
1 RS485 Connection....85
2 UTP Network Connection....85

Safety Precaution

Caution:

To reduce the risk of electric shock, do not remove cover, unless you are ready to install hard disks, please refer to the section "Hard Disk Installation".

Only qualified service technician can perform the service.

Important Safeguards:

1. Read the instruction carefully before using the unit.
2. Keep this instruction in a safe place for future reference.
3. Do not use this apparatus near water.
4. Clean only with a dry cloth.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, stoves, or other apparatus (including amplifiers) that produce heat.
7. Do not defeat the safety purpose of the polarized or grounding plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wider blade and the third prong are provided for your safety. If the provided plug does not fit into the outlet, consult an electrician for replacement of the obsolete outlet.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
9. Only use attachments/accessories specified by the manufacturer.
10. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
11. Unplug this unit during lightning storms or when unused for a long period of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is

damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

13. Moving - Disconnect the power before moving the unit. The unit should be moved with care. Excessive force or shock may result in damage to the unit and the hard disk drives.
14. Power Sources - This unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply you plan to use, consult your appliance dealer or local power company.
15. Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
16. Object and Liquid Entry - Never push objects of any kind into this unit through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.
17. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
18. Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded. U.S.A. models only--Section 810 of the National Electrical Code, ANSI/NFPA No.70-1981, get information from professional electrician to proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
19. To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.
20. Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Dispose of the replaced battery in an environmentally friendly way.

Cleaning

You can clean the unit with a moist fluff-free cloth or leather cloth.

Warning

This device is intended for use in public areas only. Surreptitious recording of oral communications may be prohibited by law.

Unpacking

Check the package for visible damage. If any item appears to have been damaged in shipment, notify the shipping company. Unpack carefully. This is electronic equipment and should be handled with care to prevent damage to the unit. Do not attempt to use the unit if any component is damaged. If any item is missing, notify the dealer.

Please save the carton and all packing materials for future use. If the unit must be returned, use the original packing materials.

Packaging contents

The package should contain the following items:

1. Digital Video Recorder 1 pcs
2. Accessories box 1 pcs

Chapter1 Product Introduction

1.1 Summary

ADEMD series network digital video recorders utilize the latest IT technologies, e.g. H.264 video compression, large capacity HDD recording, TCP/IP etc. With embedded MCU and DSP chip, it delivers digital video recording with extremely reliability in an economical package. Firmware can be easily upgrade from local or remote site.

It can either work stand alone or be built into a large scaled video surveillance system. It is an ideal solution for numerous applications, e.g. bank, telecommunication, transportation, government infrastructures, resident areas, warehouses, hydraulic facilities etc.

1.2 Features

Compression

- Supports up to 4 channels video inputs (PAL/NTSC). Each channel is independent, H.264 hardware compression and real time (PAL: 25 FPS, NTSC: 30FPS) display
- Supports both variable bit rate and variable frame rate
- Supports 1 channel audio input. Each channel use the same audio, OggVorbis compression at 16Kbps bit rate
- Compressed video and audio are synchronized. You can select either mixed stream or video stream only
- Supports CIF and QCIF resolution
- Supports multi-areas motion detection
- Supports WATER-MARK

Local processing

Record

- Supports multiple record modes, including real time, manual record, motion detection, alarm inputs, Motion & Alarm in, motion or alarm in
- Supports 1 SATA HDD, up to 2TB/HDD.
- Supports FAT32 file system
- Supports HDD S.M.A.R.T technology
- Supports cycle or none cycle record
- Supports backup the recorded files and clips
- Supports variable storage medias: Flash, USB HDD, USB CD/DVD writer

Preview and playback

- Supports BNC analog monitor and VGA output(available on ADEMD4B000TVS)
- Supports multiple preview modes (1/4)
- Supports area mask function[1]
- Supports camera tamper alarm
- Supports 1-ch playback
- Supports multi-speed playback
- Supports playback by files or by time
- Local record status display

PTZ

- Supports majority of industrial PTZ protocols
- Supports preset, sequence and cruise control[2]

Alarms

- Supports exceptional alarm, motion detection alarm, external alarm inputs, etc

Others

- Support IR remote control
- Supports multi-levels user management

[1] For fixed camera only.
[2] Not available on all SpeedDome cameras, refer to manufacturer's user manual for details.

Network

- Supports TCP/IP
- Supports PPPoE for broad band dialup
- Supports DHCP
- Supports remote parameters setup via client software
- Support real-time preview via TCP, UDP, RTP, broadcast
- Alarm information can be sent to remote host
- Network control PTZ
- Network record the real time stream
- Network download and playback of recorded files in DVR
- Supports firmware remote upgrade
- Supports bi-directional voice talk or one-way voice broadcast
- Supports preview and configuration via Windows IE
- Supports event log

Chapter2 Installation

2.1 Check DVR and It's Accessories

Upon receiving the device, check that all the items are included in your product package. There is a list in the package. If any of the items is missing, please contact your dealer immediately.

2.2 HDD Installation

Installation of the hard disks must be done by qualified personnel only. Unauthorized installation of hard disks may result in permanent damage of the disk and the recorder.

Caution:

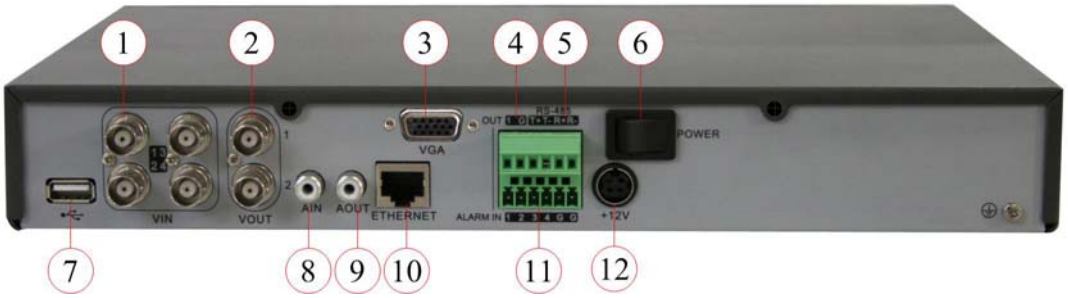
When working with electrostatic sensitive devices such as a hard disk or the DVR unit, make sure you use a static-free workstation. Any electrostatic energy coming in contact with the hard disk or DVR main board may damage it permanently.

1. Before installation of the HDD, switch the recorder off and unplug the power cable.
2. Place the recorder on a flat table, and make sure you take proper ESD precautions. Wear an ESD bracelet at all times. A cross head screwdriver should be used to screw and unscrew the various parts.
3. Open the metal top cover by removing the screws on the side and back of the cover.
4. Place the hard disks you wish to install on and fasten hard disk with 4 screws. Connect each hard disk to the main board PCB using the provided cables. Make sure that the cables does not blocking any airflow through the DVR.
5. Connect the power connector from the internal power supply to each hard disk. Make sure that the cables does not blocking any airflow through the DVR.
6. Check all connections, and mount the metal cover of the DVR.
7. Switch on the DVR.
8. Press [MENU] key to enter into DVR main menu. Go to the "Utilities" menu and

choose "Hard disk" to format the hard disks, Check if all installed disks are detected by the DVR, and if the capacity is OK. Choose "Format" and select "All" to format all hard disks. When all disks are formatted, a confirmation message will be shown on the screen. Check if all installed disks have the status "OK".

9. The installation of HDD is complete. The DVR unit is ready to use.

2.3 DVR Rear Panel



ADEMD4B000TVS Rear panel

① Video in
② Video out
③ VGA interface
④ Alarm out
⑤ RS485 T+ T- R+ R-
⑥ Power switch
⑦ USB interface
⑧ Audio in
⑨ Audio out
⑩ UTP interface
⑪ Alarm in
⑫ DC12V power supply

ADEMD4B000TV does not have a VGA interface.

2.4 External Alarm In/Out Connection

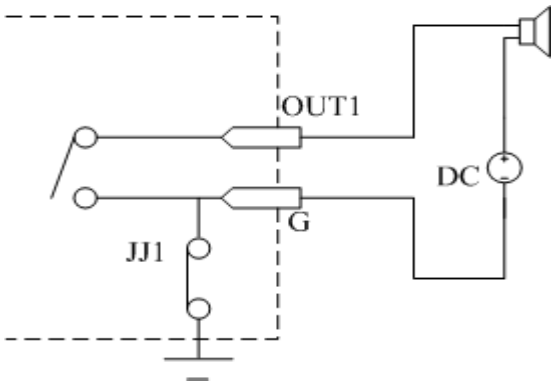
Alarm inputs

Alarm input port (dry contact):
G (GND): Connect the GND of sensor.

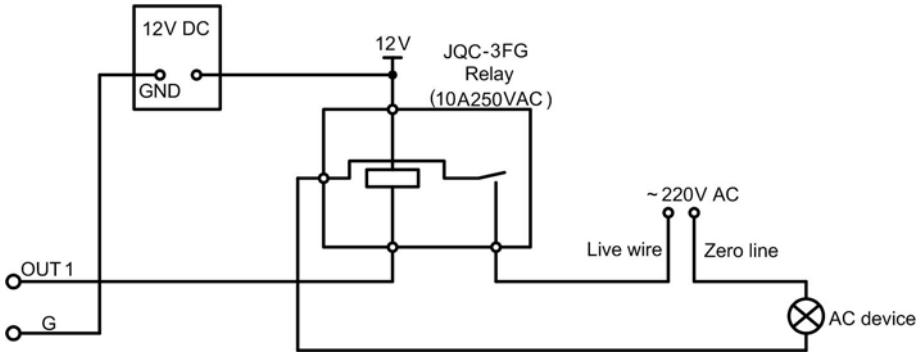
1~4: Alarm input,
support normally open/normally close.

Alarm output:
1G: 1 relay output.

Alarm output connection



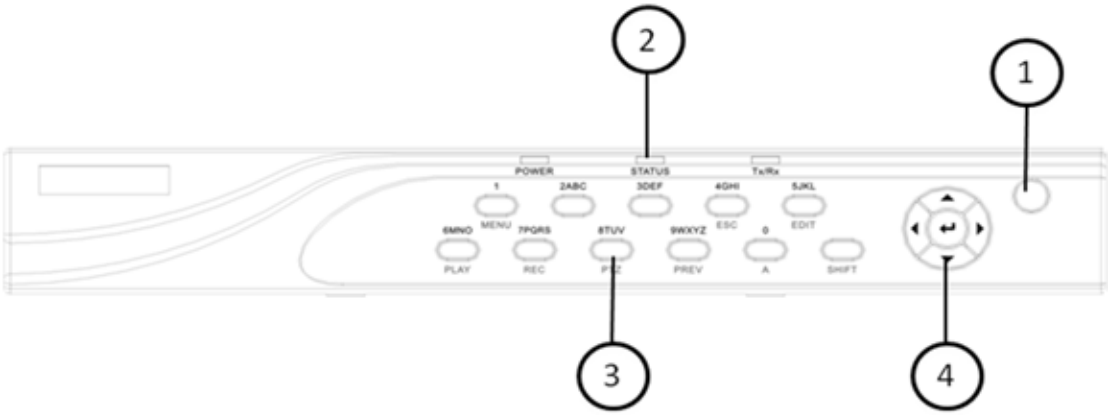
Connect with DC device



Connect with AC device

Chapter3 Operational Instructions

3.1 DVR Front Panel



Index	Type	Name	Description
1	IR Sensor		IR receiver for remote controller.
2	State Lamps	Power STATUS Tx/Rx	Green = DVR is working; Red = DVR is powered off; Green = Numeric keys is enabled; Twinkle = Data transmitting;
3	Numeric Keys		Input number, lower case, upper case character and symbols.
	Function Keys	MENU ESC EDIT PLAY REC PTZ PREV A	Switch of preview mode and menu mode; Cancel and back to parent menu. 1. Enter edit mode 2. Edit check box 3. Select clips while playback Local playback; Manual record; Enter into PTZ control mode; 1. Multi screen preview switch; 2. Switch menu mode into preview; 1. Switch between text input method (number, lower case, upper case and symbol);

			2. In preview mode, display or hide the channel status bar.
		SHIFT	Switch between numeric keys and function keys
4	Control Keys	Direction Keys	Composed of 【↑】, 【↓】, 【←】 and 【→】. 1. Menu mode, use【←】/【→】 select,【↑】/【↓】 to edit; 2. PTZ direction control; 3. Playback speed control.
		ENTER	1. Confirm in menu mode. 2. Edit check box 3. Pause while playback

3.2 Remote Controller

Index	Name	Description
1	POWER	Turn On/Off device
2	DEV	Enable/Disable remote controller
3	Numeric Keys	Select video channel, entry password
4	EDIT	Same as [EDIT] key on front panel
5	A	Switching character input method
6	REC	Same as [REC] key on front panel
7	PLAY	Same as [PLAY] key on front panel
8	INFO	Reserved
9	VOIP	Reserved
10	MENU	Same as [MENU] key on front panel.
11	PREV	Switch preview mode.
12	Direction Keys ENTER	Same as direction keys on front panel
13	PTZ	Same [PTZ] key on front panel

14	ESC	Same as [ESC] key of front panel
15	Reserved	Reserved for future function
16	F1	Reserved for future function
17	Lens control	IRIS, FOCUS ZOOM for lens control
18	F2	Reserved for future function

Loading the batteries into the remote controller

1. Remove the battery cover.
2. Insert the battery. Please make sure that the polarities (+ and -) are correctly positioned.
3. Replace the battery cover.

Start to use remote controller

Press [DEV] key, input the DVR device ID (default is “88”, can be changed in “Display” menu) and then press [ENTER] key.

Stop using remote controller

Press [DEV] key again, the remote controller is disconnected from the DVR. Please note there is no audible warning given by this unit. You may switch the DVR ID to “255”, thus the remote controller will be always connected, you don’t have to establish the connect between the RC and DVR after rebooting the unit.

Switch the DVR off

When IR controller status is on, press [POWER] key for several seconds, the DVR will be powered off.

If the remote controller is not work properly

- Check batteries polarities.
- Check the batteries capacity.
- Check whether IR sensor is covered.
- Check whether the remote controller has been linked to the DVR.
  Please change another remote controller to try again. If the problem still exists, please contact your dealer for repair or replacement.

3.3 OSD Menu Description

3.3.1 Main Menu Items

Menu Name	Function	Menu Name	Function
Display	Language Device ID Enable/Disable password Screen saver Output video format Brightness Menu transparency VGA resolution Date and Time Preview	**Camera**	Camera name and position Color OSD Display mode, position and OSD format setup Motion detection Advanced settings
Recording	Overwrite/Stop recording Stream type Resolution Frame rate Bit rate Record schedule PreRecord time PostRecord time	**Network**	DVR IP address DNS IP Multicast IP address Remote host IP and port NAS IP and name PPPoE setup
Alarms	Alarm input type (Normal open/ Normal close) Alarm response and PTZ linkage Alarm output and schedule Exception setup	**PTZ**	PTZ parameters Preset Sequence Cruise
User	Add or delete user Password User rights User MAC address User rights on channels	**Utilities**	Restore factory parameters Upgrade firmware HDD management Stop alarm output Reboot Power off View log System information

3.3.2 Menu Operation

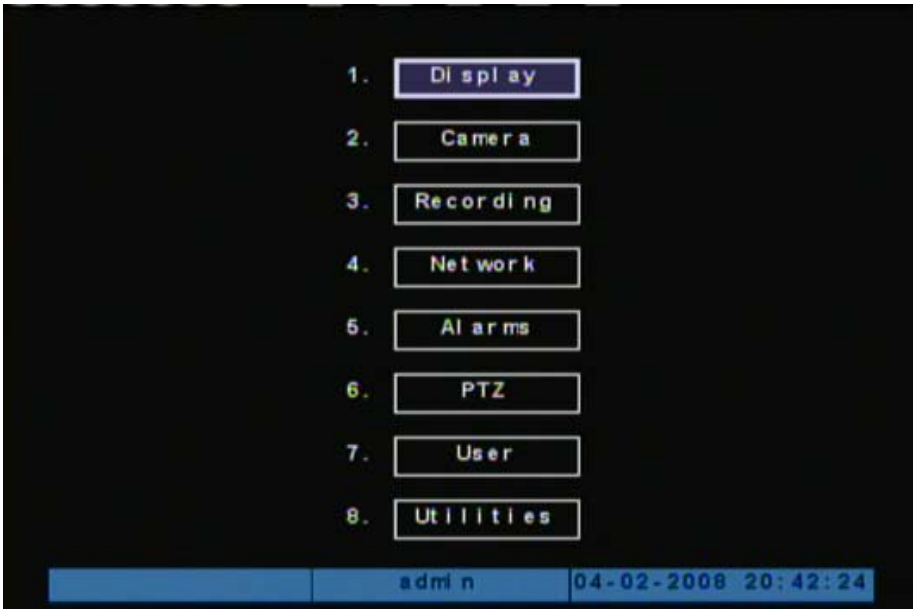
How to enter into menu mode

- Press **[**MENU**]** key to enter into DVR main menu
- Press **[**PLAY**]** key to enter into playback menu
- Press **[**REC**]** key to enter into manual record menu
- Press **[**PTZ**]** key to enter into PTZ control mode

Notes: You may be required to input user name and password. The default user name is "admin" and password is "12345".[1]

Main Menu Description

The main menu interface is shown in below:



There is one small rectangle frame named "Active Frame". It can be moved from one item to another by using direction keys (**[**↑**]** **[**↓**]** **[**→**]** **[**←**]**). When the "Active Frame" is located on one item and highlight it, you can press **[**ENTER**]** key to enter into the sub menu. For example, move the "Active Frame" to "Camera", press **[**ENTER**]** to enter into the secondary menu as below:

[1] If the "Enable Password" feature has been checked.

Each menu contains different kinds of items:

a) Check Box: Provide 2 options, "✓" means enabled and "×" means disabled. You can use **[**ENTER**]** or **[**EDIT**]** key to check/uncheck the box.

b) List Box: Provide more than 2 options. However, only one of them can be selected. You can press **[**ENTER**]** or **[**EDIT**]** to enter into edit mode, then use **[**↑**]** and **[**↓**]** to select one option.

c) Edit Box: The edit box is used to input characters. Press **[**EDIT]key to enter into edit mode, you can input characters as following:

- Press **[**A**]** key on the remote controller to select input method: number, upper case, lower case or symbols;
- Use **[**→**]** and **[**←**]** keys to move cursor;
- Use **[**EDIT**]** key to delete the previous character;
- Press **[**ENTER**]** or **[**ESC**]** to exit edit.

d) Button: Execute a special function or enter into next sub-menu. For example, press "Policy" button to enter into sub-menu. Press **[**Done**]** to save parameters and return to parent menu. Press **[**Cancel**]** button to cancel and return to parent menu.

How to exit menu

Press **[**ESC**]** key to exit menu and return to preview mode.

3.4 Character Input

In the menu interface, if you enter into edit status, for example, in the “camera name” edit box at the bottom of screen, the input status is appeared:

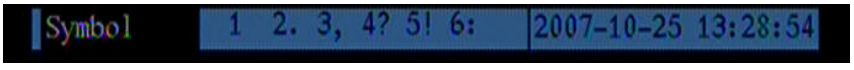
Here you can press numeric keys to input digital number.

Press **[**A**]** key to change input methods. You can select “number”, “Uppercase”, “Lowercase” or “Symbol”.

Uppercase

Lowercase

Symbol

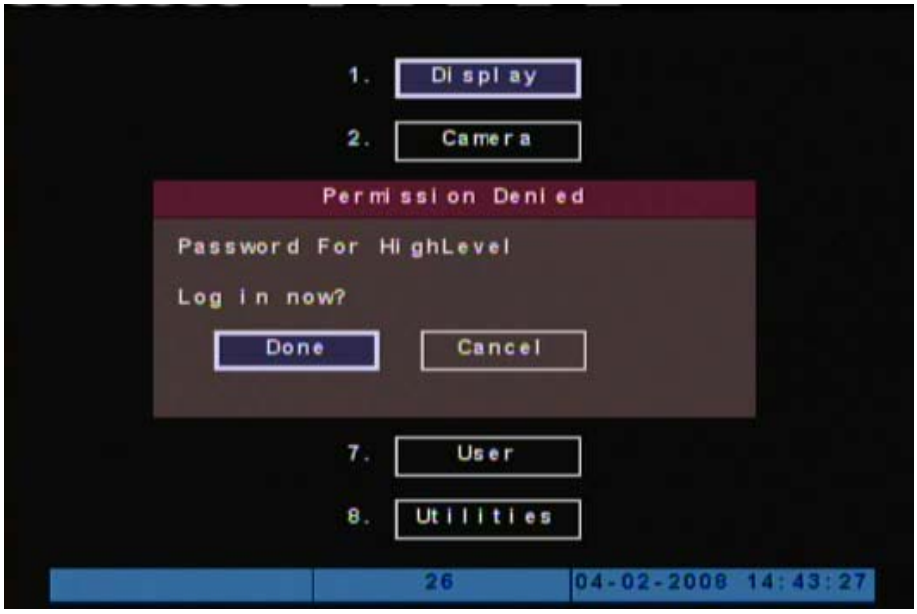


There are 24 symbols available. You can press **[**0**]** key to switch to the next page.

Chapter4 Basic Operation Guide

4.1 Power on

Note: make sure the user must have the rights to particular operation, otherwise a warning screen will shown as below.



If **[**POWER**]** lamp is off, please do as following:

Step1: Connect AC cable correctly;

Step2: Switch on the power button on the rear panel. .

Note: If HDD is not installed or not detected, there is "No Disk" text string in DVR preview screen.

4.2 Live Preview

DVR will enter into live preview mode after it is started.

Press numeric keys to switch over individual camera live view.

Press [EDIT] key to manually switch to the next camera. You can set the preview mode in the menu.

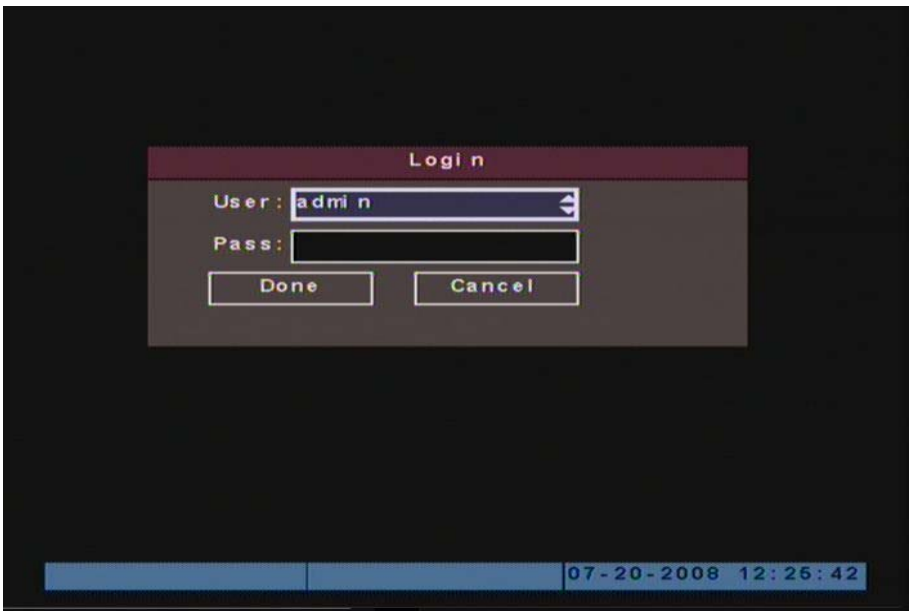
Press [Enter] key to pause/start sequence display.

Press [->]/[<-] key to switch multi-screen mode.

4.3 Login

Note: The default administrator named is “admin”, and password is“12345”. You may change the administrator password after initial login. The administrator can create 15 users and its privileges.

Login dialog is shown as below:



Use **[**↑**]** / **[**↓**]** keys to select one user, press **[**→**]** key to enter into “Password” edit box, input corresponding password, press **[**ENTER**]** key to exit edit box. Press **[**Done**]** to confirm and enter the main menu. If there is a beeper alarm, it means the user name and password are not matched. After three failures, DVR will go back to live preview mode.

4.4 PTZ Control

PTZ control mode

In preview mode, Press **[**PTZ**]** key and system will go into PTZ mode, a text string “PTZ Control” will be displayed on the bottom of the screen.

Select channel

In PTZ control mode, you can press channel buttons or numeric keys to select channel.

When a dome camera is selected, you may use the multi-function keys to control PTZ.

PTZ control key assignment

Direction control: **[**↑**]**, **[**↓**]**, **[**←**]**, **[**→**]**

ZOOM: **[**ZOOM+**]**, **[**ZOOM-**]** (on remote controller)

FOCUS: **[**FOCUS+**]**, **[**FOCUS-**]** (on remote controller)

IRIS: **[**IRIS+**]**, **[**IRIS-**]** (on remote controller)

Exit PTZ control mode

Press **[**ESC**]** to exit the PTZ mode and return to live preview mode.

4.5 Manual Record

Manual record

In either preview of menu mode, press **[**REC**]** key to enter the Manual Record screen as shown in below.

Description

Channel: List the available channels on the DVR.

Status: There are four available statuses. =idle; Green=Recording; Red=Network transmission; Orange=Recording and network transmission.

Start/Stop: "✓" =Start recording; "×" = Stop recording.

Start All: Press to start all channels recording.

Stop All: Press to stop all channel recording.

Exit manual record

Press **[**ESC**]** key to exit the manual record mode.

4.6 Playback

Playback interface

In either preview of menu mode, press **[**PLAY**]** key to enter the “Playback” interface as shown in below.

Description

Chan: Use **[**↑**]** or **[**↓**]** key to select the channel you want to playback.

Rec Type: Use **[**↑**]** or **[**↓**]** to select recorded file type. The available options are: “All”, “All Time”, “Motion Detect”, “Alarm” and “Manual”.

Time: Define the search time period. Move “Active Frame” to the time edit box, use numeric keys to input the desired time.

Search: Search the matched recorded files and display them in the list window. If there is no matched file found, a corresponding dialog box will be popped-up.

Play (by Time): Playback the recorded video clip directly based on the time section.

Select Page: In the file list window, a max. 8 files can be displayed in one window. If the matched files are more than 8, you can select page by using the numeric keys or **[**↑**] [**↓**]** keys to list the others. 500 pages (4000 files) can be searched at one time.

File List Window: List the matched files with the start time and size. You can use **[**↑**] [**↓**]** keys to move the scroll bar to select file.

Backup Devices: You can select USB flash, USB HDD, USB CD/DVD or SATA CD/DVD writer to backup the files or clips.

Copy: Start to backup.

Backup Today: Backup all recorded files of today.

Two playback modes

1. **Search and playback file:** In the playback interface, you can select channel, record type, time section. Move “Active Frame” to “Search” button and press **[**ENTER**]** key, DVR will search and list the matched files.

One channel search

If the matched files are more than 8, you can use “Page No.” to select page (use numeric keys or **[**↑**]** **[**↓**]** keys to select page). In the file list window, use **[**↑**]** **[**↓**]** keys to move the scroll bar to the file, press **[**ENTER**]** key to playback the file.

If no matched found, a message dialog will be pop-up.

2. **Playback by Time:** In the playback interface, select channel, record type and time section, move “Active Frame” to “Play” button, press **[**ENTER**]** key, DVR will start to playback based on time section.

Operation on playback

Below images shown the playback:

One Channel Playback

At the bottom of image, there is an information bar indicates Speaker Volume, play progress in %, play speed, run rime and total rime of the file.

You may do the following operation during the playback:

- Display/Hide information bar: **[**MENU**]**
- Open/Close sound: **[**PLAY**]**
- Adjust play progress: **[**←**]** (Backward), **[**→**]** (Forward). The unit is "%".
- Adjust play speed: Normal speed is "1x". Use **[**↑**]** to increase play speed (2X, 4X, 8X and MAX). Use **[**↓**]** to decrease play speed (1/2X, 1/4X, 1/8X and Frame by Frame)
- Pause/Continue: Press **[**ENTER**]** to pause/continue playback. If played frame by frame, Press **[**ENTER**]** to play one frame.
- Copy segment: **[**EDIT**]**
- Exit: **[**ESC**]**

Exit playback

In playback interface, press **[**ESC**]** key to enter the preview mode.

4.7 Backup Recorded Files

Backup intraday recorded files

In the playback interface, move “Active Frame” to “Backup Today” button, press **[**ENTER**]** key, all intraday recorded files of all channels will be backup to the save device. A pop-up dialog will display the backup status.

If backup device is not detected, or DVR do not detect a record media, “Device Error” message dialog will be pop-up. Please ask administrator for more information.

Backup the files that matched your requirement

Step 1: Search the matched files:

In the playback interface, select the channel and record type, input the time period, move “Active Frame” to “Search” button, press **[**ENTER**]** key, DVR will start to find and list the matched files.

Step 2: Select the files that you want to backup:

In the file list window, use **[**↑**]** or **[**↓**]** keys to move the scroll bar. When the scroll bar stays at the file you wan to backup, press **[**EDIT**]** key to select it. The symbol “✓” indicate the selection tag. You can use the same method to select other files you want to backup.

Step 3: Select backup device:

Please select the backup device: USB flash memory, USB HDD, USB CD/DVD.

Step 4: Start and finish backup:

Move “Active Frame” to “Copy” button and press **[**ENTER**]** key to start backup.

When backup is started, a message box will be popped-up to indicate the result.

Backup video clips

You also can backup the video clips when the file is being playback. The steps are:

Step 1: Enter into the playback interface, and play the video by files or by time;

Step 2: Press **[**EDIT**]** key to start selecting the current position, and press **[**EDIT**]** again to stop selecting. The segment is selected;

Step 3: You can repeat step 2 to select as many as 30 segments;

Step 4: After you select all segments, press **[**ESC**]** key, a message window will pop-up. If you press "Confirm" button, DVR will start to backup the selected segments, or press "Cancel" to abort backup.

Playback backup video files

You can use our file player software to playback the video files in PC. You can find the player software in attached CD.

4.8 Turn off DVR

To Shut down DVR

Via Menu

Enter into “Utilities” menu, move “Active Frame” to “Power Off” button and enter into power off dialog, press “Yes" to shut down the DVR.

Use [POWER] key

Press **[**POWER**]** key on IR for 3seconds. DVR will be shut off.

Note: Do not switch off the power switch at real panel directly or disconnect the power cable during DVR recording, it may damage the HDD and the DVR permanently.

4.9 Video spot output

Make sure the numeric button is in “function” mode. (the status lamp is off) You may press 【shift】button to switch between “numeric” mode and “function” mode.

Step1: Connect the secondary monitor to VIDEO OUT2 port on the real panel.
Step2: Press 【3】to enter into spot out mode.
Step3: Press 【shift】to enter into numeric mode
Step4: Press 【1】 to 【4】 button to switch video spot out from channel 1 to channel 4
Note: make sure there is video signal inputs on the DVR, otherwise the spot out will not show image.

Chapter5 Advanced Operation Guide

Note: Only the users with "Parameters Setup" right have the access to the advanced operation. When the following parameters are modified and saved, you must reboot the DVR to make the new parameters effective. Modifications on other parameters do not require reboot.

- Any network parameters in "Network" menu
- Stream type, resolution and record schedule in "Recording" menu
- External alarm sensor type in "Alarms" menu
- Tamper alarm schedule in "Camera" menu
- Video lost alarm schedule in "Camera" menu
- Motion detection alarm schedule in "Camera" menu
- External alarm schedule in "Alarms" menu
- Alarm output schedule in "Alarms" menu

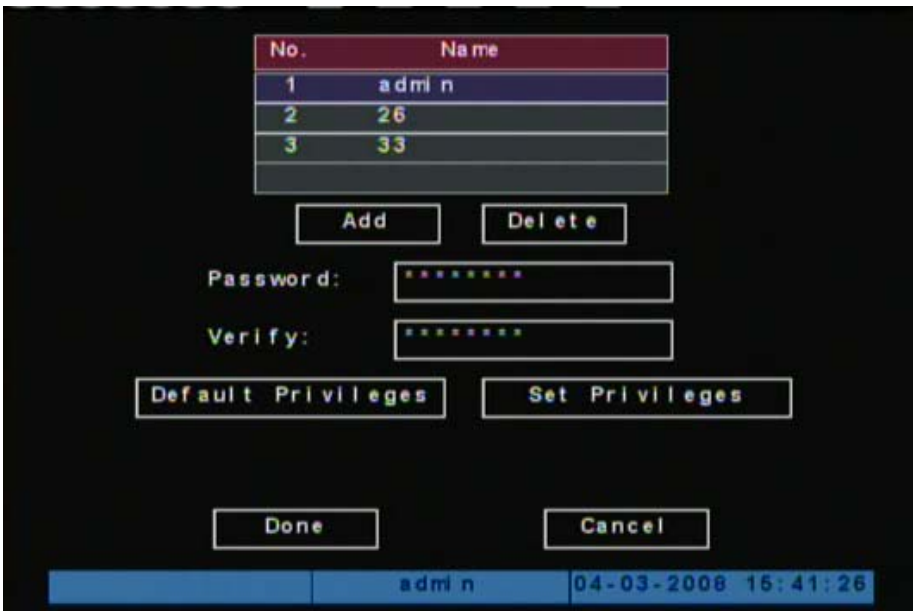
5.1 User Management

There is one default administrator from the manufacturer. The default usename is “admin” and password is “12345”. The administrator’s name can not be changed, you may change the password after initial login.

Move “Active Frame” to “User”, press **[**ENTER**]** key to enter into “User Management” window.

5.1.1 Add User

Step 1: Enter into “User Management” menu:



Step 2: Add new user name:

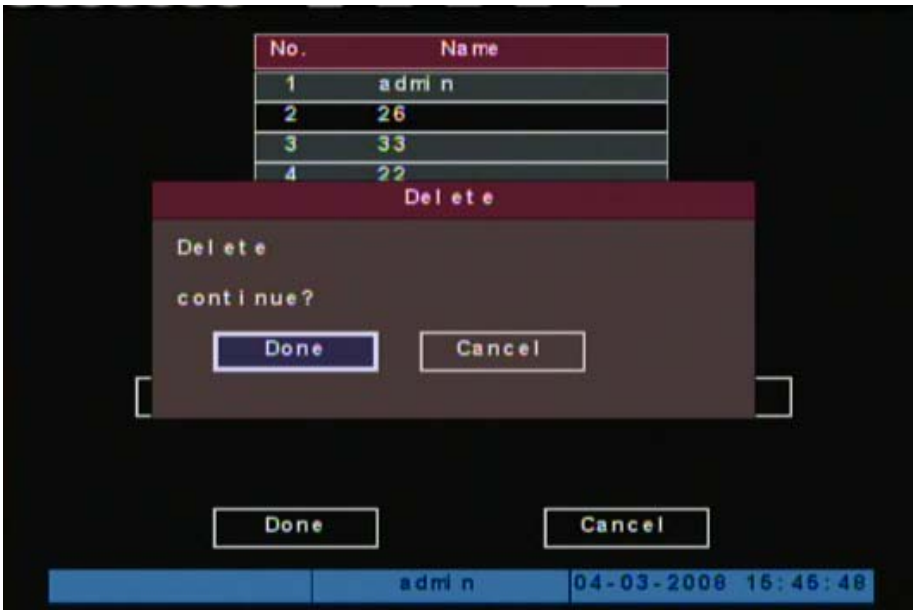
Move to “Add” button and press **[**ENTER**]**, in the pop-up menu, input the new user name, press **[**ENTER**]** and return to “User Management” menu. Max. 15 users can be added.

Step 3: Setup the password for new user:

After you add one new user, the password is null. You can use **[↑] [↓]** keys to move the "Active Frame" to "Password", press **[**Edit**]** to go into the edit mode, enter your password twice and press **[**Done**]** to confirm.

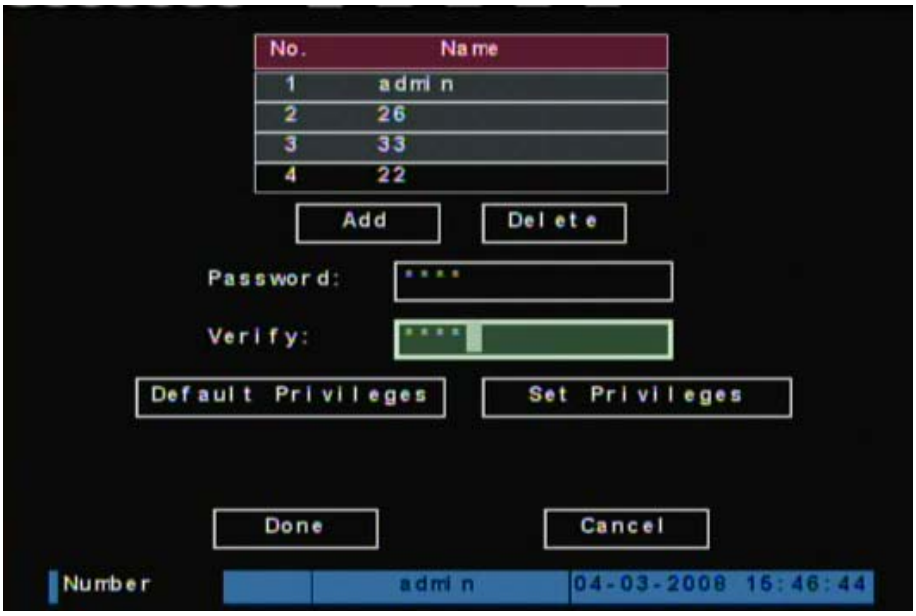
5.1.2 Delete User

You can use **[↑] [↓]** keys to select one user, then use **[→]**, move "Active Frame" to "Del" button, press **[**ENTER**]**, in the pop-up window, press **[**Done**]** to delete the selected user and return. Press "Cancel" or **[**ESC**]** to abort.



5.1.3 Password Modification

Move “Active Frame” to “User” icon, press **[**ENTER**]** key to enter into “User Management” menu.



Use **[**↑**][**↓**]** keys to select one user, and use **[**→**]** key to move “Active Frame” to password edit box, and press **[**EDIT**]** key to enter into edit mode. Press numeric keys to input the new password. The password should be Max. 16 digits. Press **[**ENTER**]** key to exit. Move “Active Frame” to “Verify password” edit box, repeat password. Move “Active Frame” to “Confirm” button, and press **[**ENTER**]** to confirm.

If the two entries do not match, an error message will shown as above, please press **[**ENTER**]** to return password edit box, and enter the new password again.

5.1.4 User Rights

The new user does not have any operation rights. You must setup rights for it.

On the “User Management” menu, use **[↑] [↓]** keys to select the new user, then use **[→]** key to **[**Default Privileges**]** button, press **[**ENTER**]**, the user will have the default rights. The default rights include local playback, remote playback and view log.

If you want to define the specific rights for a user, move “Active Frame” to **[**Set Privileges**]** button and press **[**ENTER**]** to enter into the window as below:

Operational rights are divided into “Local Rights” and “Remote Rights”. You can assign the necessary rights to the user. Use **[→] [←]** key to move “Active Frame” to the corresponding right items, press **[**ENTER**]** or **[**EDIT**]** key to enable or disable the item. “✓” means the right is assigned to that user

After assignment, press **[**Done**]** to exit to “User Management” window, press **[**Done**]** button again to confirm the changes. Otherwise your setting will not be saved.

User rights description

“Local Rights”:

Local rights represent the operation on the DVR. E.g. Operate via front panel, remote controller and RS-485 keyboard.

PTZ control: Locally control PTZ;

Record: Manual start/stop recording;

Playback: Local playback and backup the recorded files;

Parameters Setup: Locally setup the DVR parameters;

Log: Locally view the log on DVR;

Utilities: Upgrade firmware, format HDD, reboot DVR and shut down DVR, etc.

“Remote Rights”:

Remote rights represent the operation via the network client software.

PTZ Control: Remote control PTZ;

Record: Remote manual start/stop recording;

Playback: Remote playback, download the recorded files on DVR;

Parameters Setup: Remote setup the DVR parameters;

Log: Remote view the log on DVR;

Utilities: Remote upgrade firmware, format HDD, reboot DVR and shut down DVR, etc.

Voice: Voice talk with DVR from client software;

Preview: Network live preview;

Alarm: Remote control DVR alarm output;

Local Out: Control DVR via remote front panel simulator; Note: The simulator is not delivered with standard package;

Com Control: DVR RS-485 transparent channel function.

MAC address

This MAC address is not the address of DVR but the PC that will access DVR. If you setup this MAC address, only the PC with this MAC address can access this DVR.

5.2 Device ID

The default device ID of DVR is “88”. If there are more than one DVR in one place, please make sure to set different device ID for each DVR.

In “Display” menu, move “Active Frame” to the device ID edit box, in the edit mode, you can use numeric keys to input new device ID. The valid device ID is 001~255.

Press **[**Done**]** button to save the setting and back to the previous menu.

5.3 Video Format and VGA Resolution

Video Format

You can modify video standard to match video input.

In “Display” menu, move to “Video Format”, use **[↑] [↓]** key to select PAL or NTSC video format. Press **[**Done**]** button to save, or press **[**Cancel**]** to abort.

VGA Resolution

There is one VGA interface at the real panel of DVR[1]. You can use it to connect with VGA monitor. You can define the resolution of VGA, refresh frequency in “Display” menu.

There are following options: 1024*768/60Hz, 1280*1024/60Hz and 800*600/60Hz.

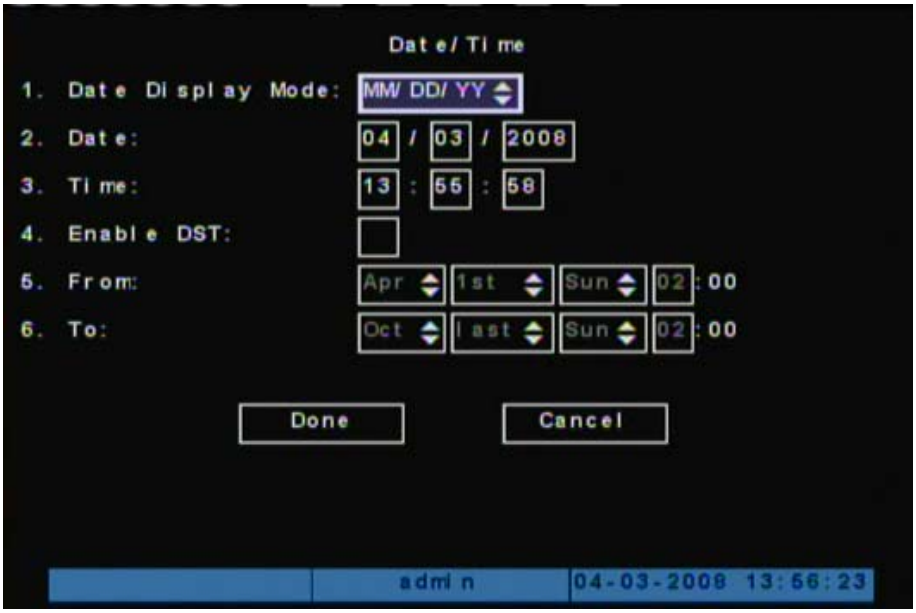
[1] Only available on ADEMD4B000TVS.

Press **[**Done**]** button to save, or press **[**Cancel**]** to abort.

5.4 Date and Time Setup

5.4.1 Date and Time Setting

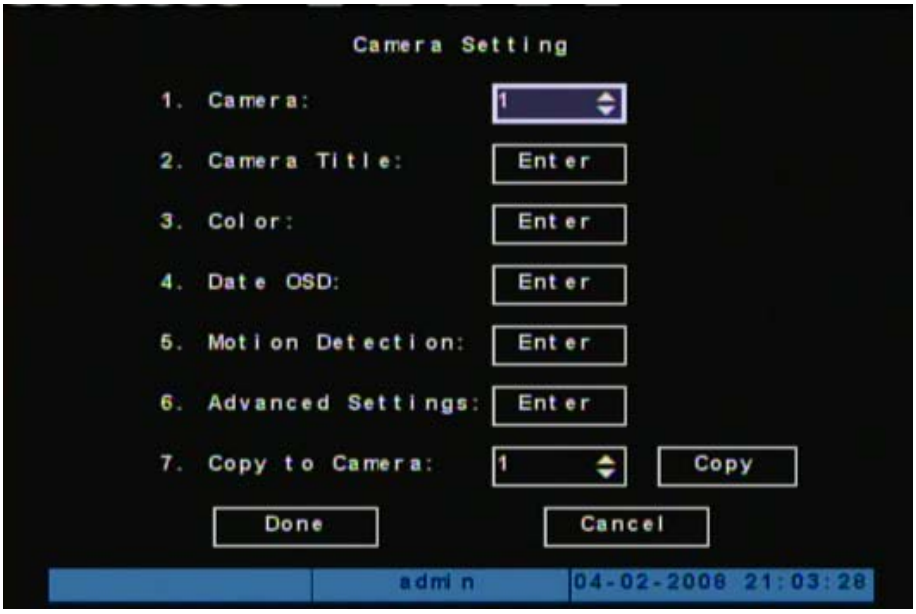
In “Display” menu, you can setup DVR system date and time. Date/Time setting window is shown in below:



5.4.2 Date and Time Display Mode

You can setup display properties for each camera, including display format, position and format. And you can copy the properties of one camera to the others.

In “Image Setup” menu as following, select one camera:

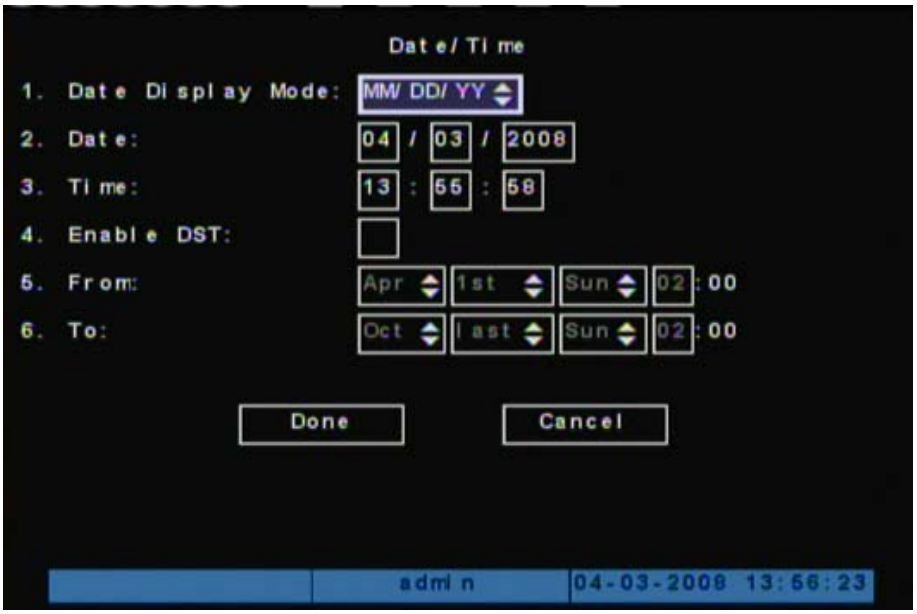


Display mode: There are several display modes: Opaque&Steady, Transparent& Steady, Transparent&Flashing, Opaque&Flashing,

Move “Active Frame” to “Date OSD”, you can select one mode out of 4 options.

5.4.3 Daylight Saving Time Setup

DST means Daylight Saving Time, select the check box to enable the function, and you can set DST start time and end time in your region.


Date/Time
1. Date Display Mode: MM/ DD/ YY
2. Date: 04 / 03 / 2008
3. Time: 13 : 55 : 58
4. Enable DST:
5. From: Apr 1st Sun 02 : 00
6. To: Oct Last Sun 02 : 00
Done
Cancel
admin
04-03-2008 13:56:23

5.5 Camera Setting

5.5.1 Camera Title

In “Camera Setting” menu, you can define title for each camera.

The steps to setup camera title are listed below:

Step 1: Select one camera.

Step 2: Move “Active Frame” to “camera Title” edit box, press **[**Enter**]** key to enter into edit window, move to Title, you can input numbers, uppercase and lowercase characters (refer to Chapter 3.4). The camera name can support max.32 characters.

Step 3: Press **[**Done**]** to save the setting.

Change Camera Title Display Position

If you do not want to display camera name, just disable the check box -Position below. Then the disable flag is “×”. If you enable the check box, you can setup the display position. Position setting can be copied to the others. The setup steps are listed below:

Step 1: Enter into “Camera” menu.

Step 2: Select one camera.

Step 3: Enter “Camera Title”.

Step 4: Enable the check box-“Position”, move “Active Frame” to “Position” button, press **[**Setting**]** to enter into camera title position setup windows. Use **[↓] [↑] [→] [←]** keys to move camera name position, press **[**ENTER**]** to return to “Camera Setting” menu, and press **[**Done**]** button to save settings or press**[**Cancel**]** to abort.

5.5.2 Video Parameters Setup

To get the best video quality, you may need to adjust video parameters for each individual camera.

Video parameter can be setup individually, or you can copy the setting from one to the others. Following are the steps to set the video parameter:

Step 1: Enter into “Camera” menu.

Step 2: Please use **[↓] [↑]** keys to select one camera.

Step 3: Click “Color” setup button and enter into sub menu. Adjust brightness, contrast, Tone and saturation to get the best image quality.

Step 4: Press **[**Done**]** to save the setting or press **[**Cancel**]** to abort.

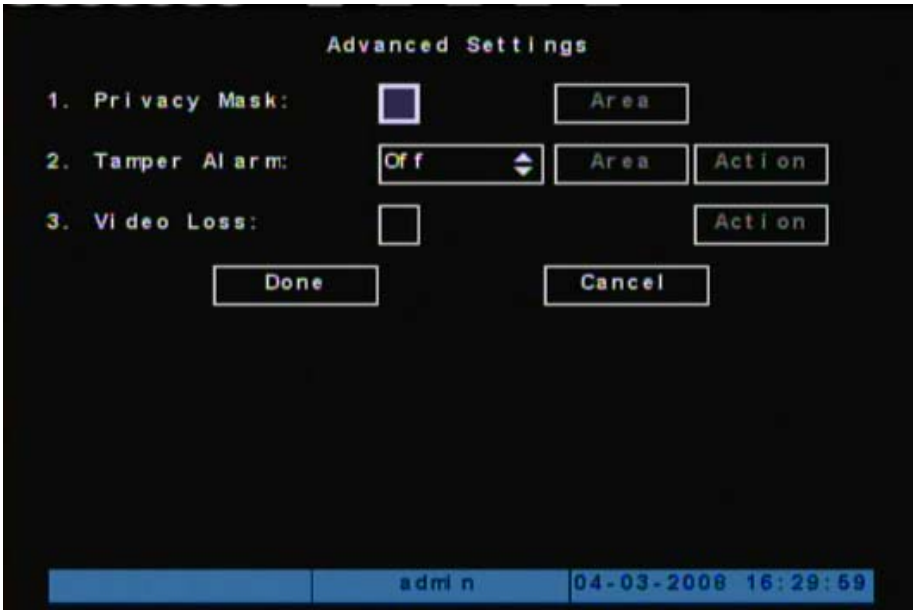
5.6 Mask Area Setup

In some circumstances, you may need to mask some sensitive area on the scene. The masked areas will not be previewed and recorded. To setup the mask, please follow the steps in below:

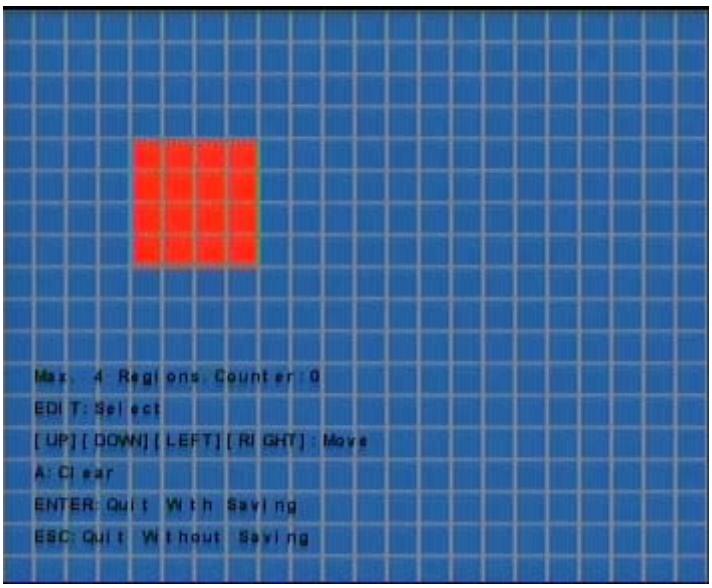
Step 1: Enter into “Camera” menu.

Step 2: Use **[↓] [↑]** keys to select one camera.

Step 3: Click “Advanced settings” setup menu:



Step4: Enable “Privacy Mask” option, click **[**Area**]** button to enter into mask setup window.



Step 5: Setup mask area: Setup the masks as prompted on screen.

Step 6: Save mask area: Repeat step2~4 to setup mask area for other cameras. In “Advanced Setting” menu, press **[**Done**]** to save the mask areas or press **[**Cancel**]** to abort.

A sample image with mask is shown in below:

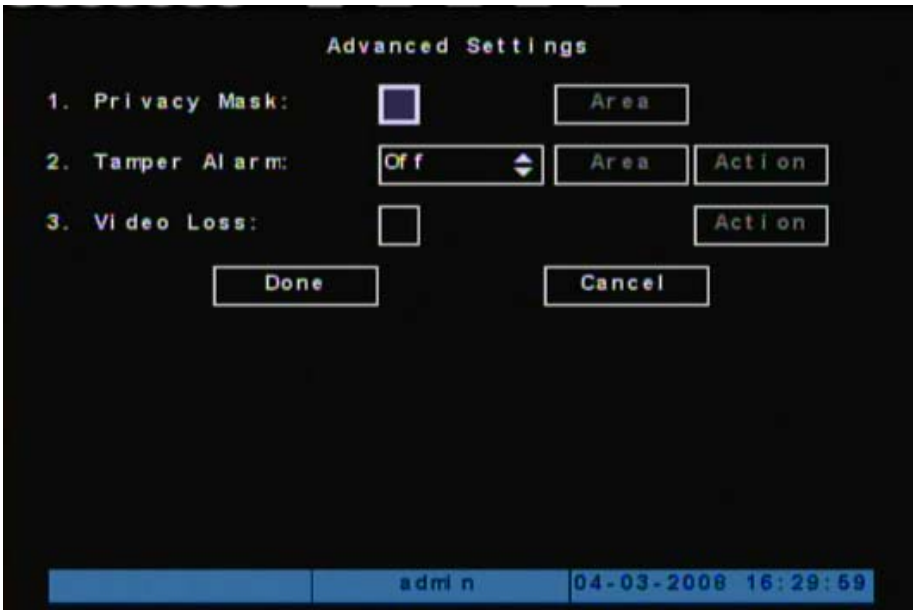
5.7 View Tampering Alarm

5.7.1 Enable Tamper Alarm

Step 1: Enter into “Camera” menu.

Step 2: Select camera: use [↓] [↑] keys to select one camera.

Step 3: Enter into “Advanced settings” setup menu.



Step 4: Select sensitivity.

Move to the drop-down list to select the sensitivity for Tampering Alarm, you can use **[↓] [↑]** keys to select the sensitivity. (Low, Normal, High) Choose one of the sensitivity and

the Tamper alarm is enabled.

5.7.2 Select tampering area

Step 1: Enter the “Area” setting window.

Step 2: Select tamper area as prompt on screen.

Only one tamper area can be setup.

5.7.3 Alarm handling

Step 1: Press **[**Action**]** to save the setting

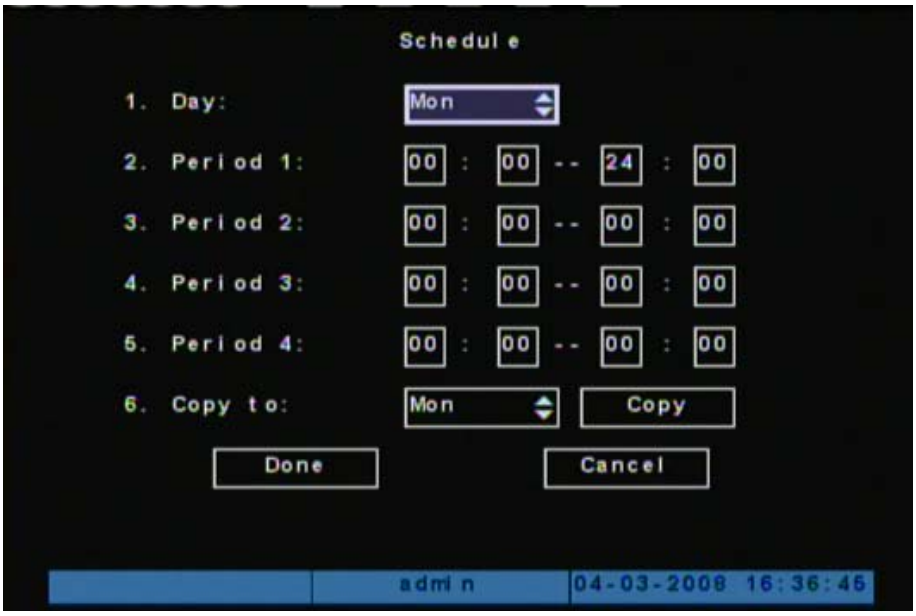
Step 2: Enter “Alarm Handling”.

Step 4: Set Temple Alarm handling.

Step 5: Press **[**Done**]** to save configuration or press **[**Cancel**]**

5.7.4 Temple Alarm schedule

Step 1: Enter “Event Schedule”.


Schedule
1. Day: Mon
2. Period 1: 00 : 00 -- 24 : 00
3. Period 2: 00 : 00 -- 00 : 00
4. Period 3: 00 : 00 -- 00 : 00
5. Period 4: 00 : 00 -- 00 : 00
6. Copy to: Mon Copy
Done
Cancel
admin
04-03-2008 16:36:46

Step 2: Set schedule as desired. Max. 4 time periods allowed for one day. Schedule can be copied from one day to the others.

In case of temper alarm occurs, DVR will handle the alarm based on the schedule. Y

Notes: Time periods can not be overlapped.

5.8 Video Loss Alarm

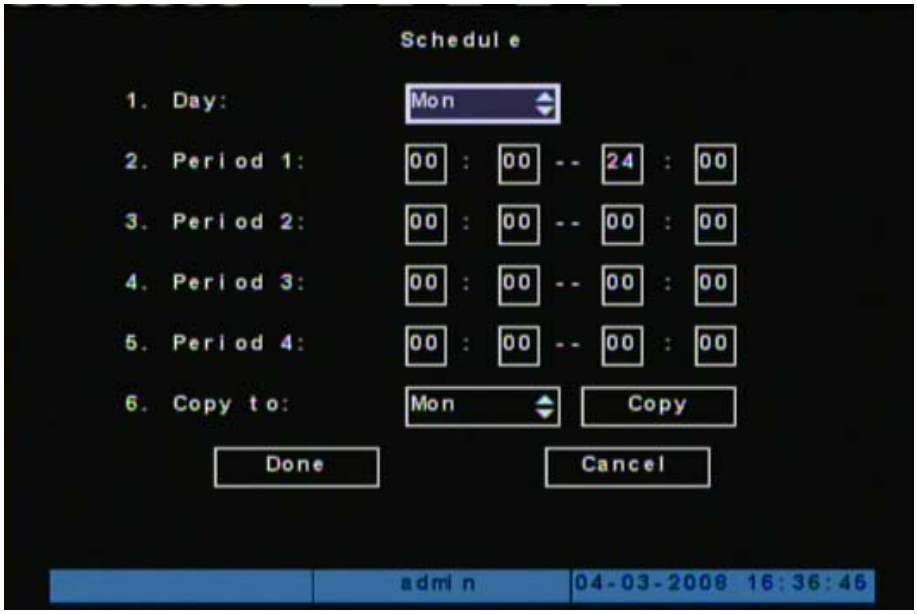
DVR will generate alarm in case of video loss, if this feature is enabled. Please follow the steps in below to setup the video loss alarm:

Step 1: Follow the Step1~3 as described in chapter 5.7.1.

Step 2: enable check box next to ”Video Loss”

Step 3: Enter “Action”.

Step 4: Setup alarm schedule: Set the schedule. DVR will only response to the video loss alarm occurs within the schedule.



Step 5: Set the alarm handling.

Step 6: Save alarm setup: Press **[**Done**]** to return to "Advanced Setting" menu or press **[**Cancel**]** to abort. DO REMEMBER to press **[**Done**]** again to save your setting.

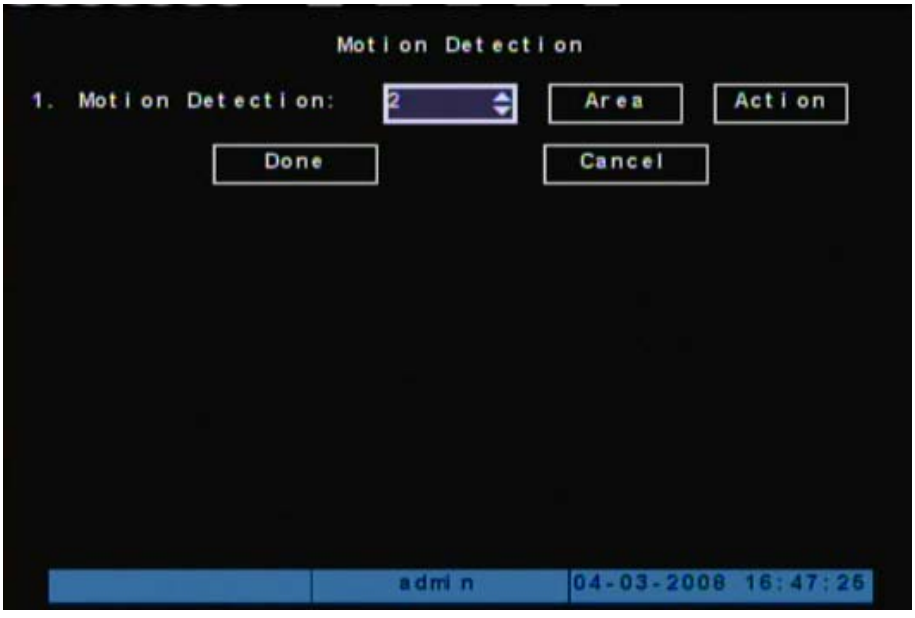
5.9 Motion Detection Alarm

If you enable this function, when there is a motion detected, DVR will make alarm.

Step 1: Enter “Camera” menu:

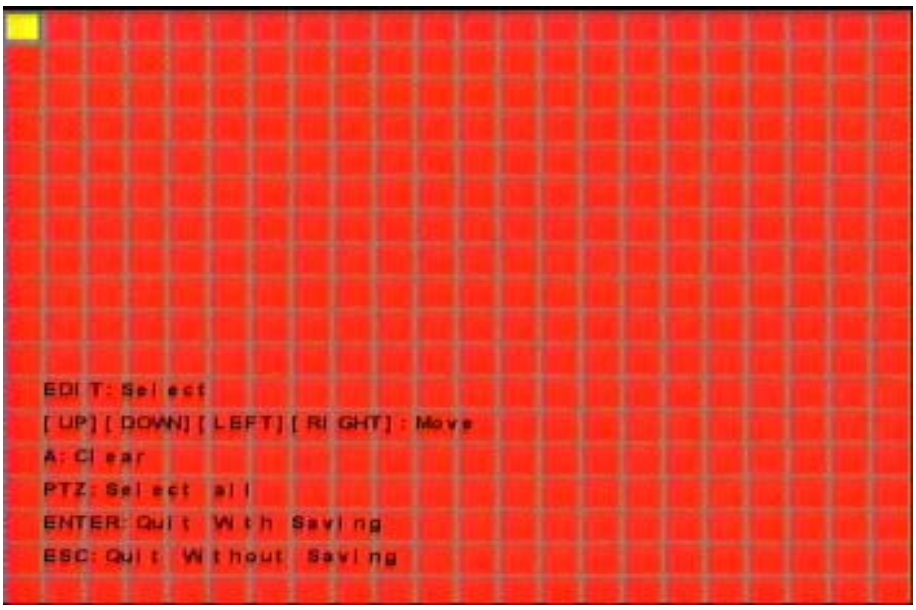
Step 2: Select camera: Use **[↓] [↑]** key to select one camera.

Step 3: Enter “Motion Detection”.



Step 4: Select motion detection sensitivity range from 0~5 and off.

Step 5: Area setup: Enter the “Area” setting window. Set the sensitive area as prompted on screen.



Step 6: Motion alarm handling: Enter the “Motion Alarm Handle” menu:

Step 7: Motion alarm record channel setting: In case of motion alarm occurs, DVR can trigger related camera to start recording. In “Motion Alarm Handle” menu, you can select one or more record channels. Please use **[**ENTER**]** or **[**EDIT**]** key to check the box as needed.

Note: In order to make motion alarm recording take effect, you must set the “Rec. Type” as “Motion Detection” or “Motion|Alarm”. Please refer to chapter 5.11 for recording setup.

Step 8: Motion alarm schedule: Set the schedule as desired. DVR will only response to the motion alarm occurs within the schedule.

Step 9: Motion alarm handling: Set the alarm handling as needed.

Description: If “On Screen Warning” is enabled, in case of motion alarm occurs and DVR is in preview mode, it will pop-up the live image of related camera. If more than one camera are assigned, DVR will pop-up the live image in sequence with a interval of 10 seconds. When the motion alarm is disappeared, DVR will go back to preview mode.

Step 10: Save motion alarm setup: Press **[**Done**]** to return to “Advanced Setting” menu or press **[**Cancel**]** to abort. DO REMEMBER to press **[**Done**]** again to save your setting.

Note: Motion alarm area can not be copied.

If you want to disable motion alarm area and motion alarm handling, simply set motion alarm sensitivity to “Off”.

5.10 Live View Setup

In “Display” menu, you can setup live preview properties.

Enter the “Preview” setting window, you can setup preview mode, display interval for sequence, enable/disable audio preview and preview layout etc..

Preview mode: For preview mode item, you can use **[↑] [↓]** key to select one mode.

Display interval: Set the interval for sequence display. For Main Chan, if “Never” is selected, sequence display is switched off. For Aux Chan, you can configure from 0 to 180 seconds, 0 means switch off sequence display. You may press[3] at function mode, and

select the channel to be displayed on the auxiliary(spot) monitor.

Audio preview: Play the audio with live image.

Alarm display time: Time to display the alarm live video.

Preview layout setup: To set the video layout. First select the preview mode, then move the “Active Frame” to the matrix below, select desire position on the matrix and press [Enter] or [EDIT] key to enter into “Edit” mode, you may use **[↑] [↓]** keys or numeric keys to select a particular camera for this position, or you can select “X” to covert this camera.

Save setting: Press **[**Done**]** to save your setting or press **[**Cancel**]** to abort.

5.11 Recording Setup

You may enter the “Recording Setting” windows from main menu.

Recording menu description:

If HD Full: There are two options in case of hard disk full: “Overwrite” and “Stop recording”. If you select “Overwrite”, when all HDDs in DVR are full, DVR will overwrite the earliest recorded files and continue recording. If you select “Stop recording”, when all HDDs are all full, DVR will stop recording and generate “Exception” alarm. Please refer to chapter 5.16 for exception menu.

Camera: Use **[↑][↓]** keys to select camera.

Stream Type: You may choose from “Audio & Video” stream or “Video” stream only.

Resolution: Recording resolution. You may choose from QCIF, CIF.

Bit Rate: Set the maximum bit rate of video stream. The bit rate value has following options (bps): 32K, 48K, 64K, 80K, 96K, 128K, 160K, 192K, 224K, 256K, 320K, 384K, 448K, 512K, 640K, 768K, 896K, 1M, 1.25M, 1.5M, 1.75M, 2M and “User define”.

The max bit rate selection depends on the recording resolution and frame rate. A typical setting is recommended in below:

CIF @ Real time: 384K~768Kbps

The actual setting may depends on the camera, background and image quality etc.

Frame Rate: Frames per second. You may choose from: Full (PAL @ 25 FPS, NTSC@ 30FPS), 20, 16, 12, 10, 8, 6, 4, 2, 1, 1/2, 1/4, 1/8, 1/16. For lower frame rate, you may select low bit rate size.

PreRecord Time: When the alarm recording is enabled, you may set the prerecord time at here. The available options are: No PreRecord, 5 Seconds (default), 10 Seconds, 15 Seconds, 20 Seconds, 25 Seconds, 30 Seconds and Max PreRecord.

PostRecord Time: The available options are: 5 Seconds (default), 10 Seconds, 30 Seconds, 1 Minute, 2 Minutes, 5 Minutes, 10 Minutes, 15minutes and 30 mintues.

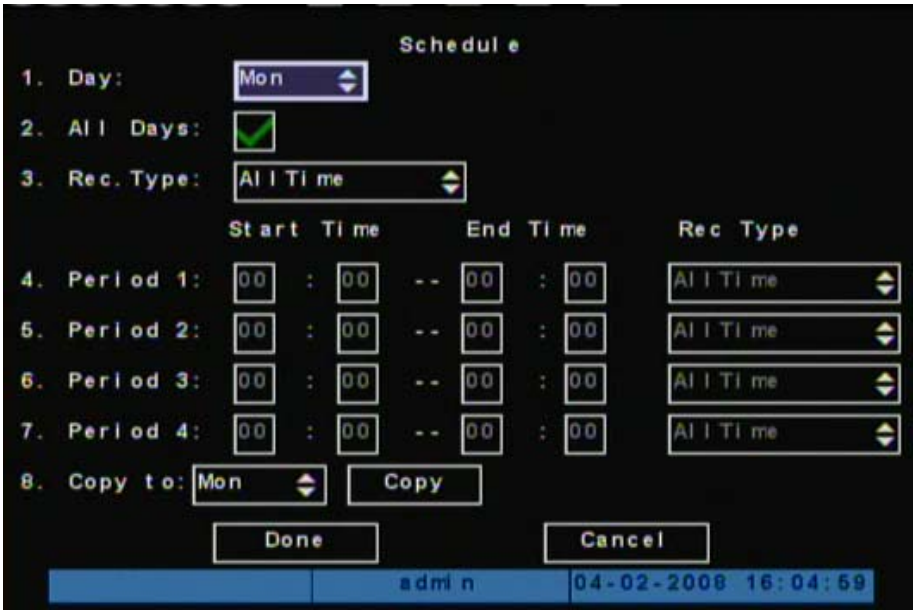
Enable Rec: Enable/Disable recording for the selected camera.

Schedule: When camera recording is enabled, you can set recording schedule at here.

All day recording:

Step 1: Enter into recording schedule window

In recording menu, use **[**ENTER**]** or **[**EDIT**]** key to enable record function, press “Schedule” button to enter into recording schedule menu.


Schedule
1. Day: Mon
2. All Days:
3. Rec. Type: All Time
Start Time
End Time
Rec Type
4. Period 1: 00 : 00 -- 00 : 00 All Time
5. Period 2: 00 : 00 -- 00 : 00 All Time
6. Period 3: 00 : 00 -- 00 : 00 All Time
7. Period 4: 00 : 00 -- 00 : 00 All Time
8. Copy to: Mon
Copy
Done
Cancel
admin
04-02-2008 16:04:59

Step 2: Select one day and enable all day recording option

Move the “Active Frame” to “Day”, select a day and check the “All Day” box.

Step 3: Record type

Select “Rec Type” from: All Time, Motion Detect, Alarm, Motion|Alarm, or Motion&Alarm.

For all day record mode, only one record type can be selected.

Step 4: Copy to other days

You can repeat step2 and step3 to setup for other days. Or you can copy the current day to others.

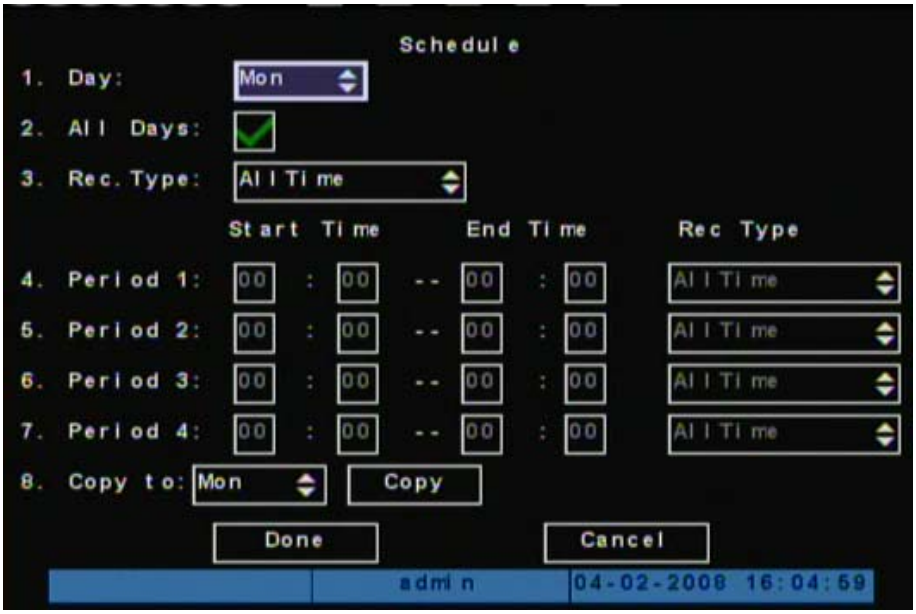
Step 5: Save setting

Press **[**Done**]** and exit to the “Recording” menu. Press **[**Done**]** again to save the setting, or press **[**Cancel**]** to abort.

Scheduled recording:

Step 1: Enter into recording schedule menu

In recording menu, use **[**ENTER**]** or **[**EDIT**]** key to enable record function, press “Schedule” button to enter into recording schedule menu.


Schedule
1. Day: Mon
2. All Days:
3. Rec. Type: All Time
Start Time
End Time
Rec Type
4. Period 1: 00 : 00 -- 00 : 00 All Time
5. Period 2: 00 : 00 -- 00 : 00 All Time
6. Period 3: 00 : 00 -- 00 : 00 All Time
7. Period 4: 00 : 00 -- 00 : 00 All Time
8. Copy to: Mon Copy
Done
Cancel
admin
04-02-2008 16:04:59

Step 2: Select one day and disable all day recording option

Move the “Active Frame” to “Day”, select a day and uncheck the “All Day” box.

Step 3: Setup time period and record type

There are 4 time periods for one day, enter the start time and stop time for each time period, and select record type.

Note: Please make sure the time periods is not overlapped.

Step 4: Copy to other days

You can repeat step2 and step3 to setup for other days. Or you can copy the current day to others.

Step 5: Save

Press **[**Done**]** and exit to the “Recording” menu. Press **[**Done**]** again to save the setting, or press **[**Cancel**]** to abort.

Note:

1) **If record type is “Motion Detect” or other related types, you must setup “Motion Detection” in order to trigger motion recording (refer to chapter 5.9).**
2) **If record type is “Alarm” or other related types, you must setup “Alarms” in order to trigger alarm recording (refer to chapter 5.12).**
3) **The valid time period is between 00:00~24:00.**

5.12 Alarm I/O Setup

From the main menu, move “Active Frame” to “Alarms” and press **[**ENTER**]** key to enter into alarms setting page:

External alarm input setup:

Step 1: Select alarm input: Use **[↑] [↓]** keys to select one alarm input.

Step 2: Select input type: Select from N.O. or N.C.

Step 3: Alarm handling: Check the “Alarm Handling” box to enable “Action” and “PTZ Control”. Enter the “Action” setting window.

Step 4: Alarm trigger record channel setup

You can select channels to record for each alarm input. In the sub menu, you can use **[**ENTER**]** or **[**EDIT**]** key to enable record channel.

Note: In order to trigger the channel recording, in “Recording” menu, you must enable recording and select record type as “Alarm” or other related type. Please refer to section 5.11.

Step 5: Schedule for alarm inputs

You may set the schedule for alarm inputs, DVR will automatically set the inputs into Arm/disarm according to the schedule, and take action according to the alarm handling setting.

Step 6: Alarm handle method

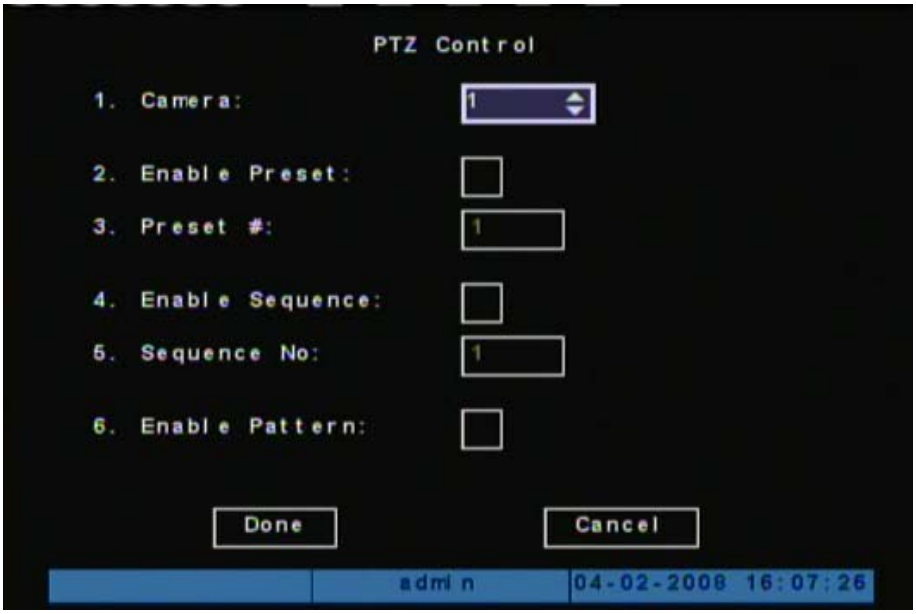
You can select one or more handle method: “On Screen Warning”, “Upload to Center” and “Trigger Alarm Output”.

Step 7: Save setup

In “Alarm in Handling” sub menu, press **[**Done**]** and return “Alarms” menu. In “Alarms” menu, press **[**Done**]** again to save the setting.

Step 8: PTZ Control

Move “Active Frame” to “PTZ” button, press **[**ENTER**]** key to enter into “PTZ Control” window.



First select one camera, and then select one of following PTZ linkage:

- Preset: Check the “Enable Preset” box to enable recall preset, and enter the preset # in the following box. In case of alarm input activated, DVR will trigger SpeedDome to an assigned preset. Please refer to chapter 5.14 for preset setup.
- Sequence: Check the “Enable Sequence” box to enable recall sequence, and enter the sequence # in the following box. Please refer to chapter 5.14 for sequence setup.
- Pattern: Check the “Enable Pattern” box to enable recall pattern. Only pattern # 1 will be recalled. Please refer to chapter 5.14 for cruise setup.

Press **[**Done**]** to save and return to “Alarms” menu. Press **[**Cancel**]** to abort.

Note: Not all PTZ cameras are supported. Please refer to manufacturer’s instruction for details.

Step 9: Copy the parameters to other external alarm input: You can copy the parameters of current alarm input to other external inputs.

Step 10: Save setup In “Alarms” menu, press **[**Done**]** to save the parameters or Press **[**Cancel**]** to abort.

Alarm relay output setup

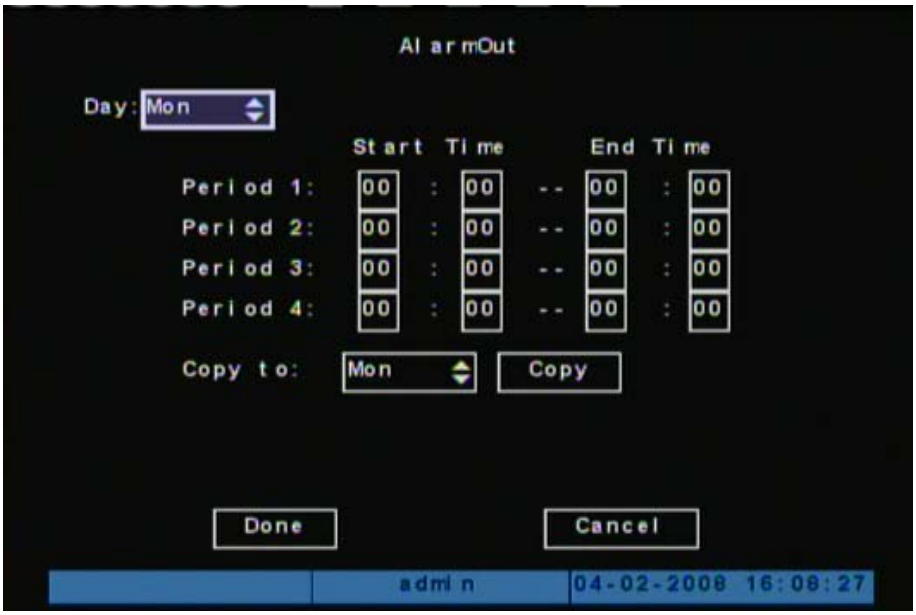
Step 1: In “Alarms” menu, use **[**↑**] [**↓**]** keys to select one alarm output.

Step 2: Select delay time:

Set the output delay time from: 5 Seconds, 10 Seconds, 30 Seconds, 1 Minute, 2 Minutes, 5 Minutes, 10 Minutes and Manual Stop. If you select “Manual’, the alarm output will not be deactivated until you press “Clear Alarm” button in the “Utilities” menu. So the actual alarm output time is made up of alarm input time and the delay time.

Step 3: Enter into alarm out schedule:

You can set the schedule to make alarm output into effective.



Step 4: Copy one alarm output parameters to other alarm output

In “Alarms” menu, you can copy parameters of current alarm output to the others.

Step 6: Save setup

In “Alarms” menu, press **[**Done**]** to save the parameters or Press **[**Cancel**]** to abort.

5.13 Network Setup

If you want to get access to DVR from network, you must setup network parameters.

In main menu, move “Active Frame” to “Network” icon and press **[**ENTER**]**, the network setting window is indicated as below:

5.13.1 Network Basic Settings

IP address: This IP address must not be conflict with other IP. If there is DHCP server in network, you can set the IP as “0.0.0.0”, save and reboot DVR. In reboot process, DVR will search the DHCP server and get one dynamic IP address. This box will display the dynamic IP address. If DVR uses PPPoE function, it can dialup into internet and this box will display the dynamic internet IP address.

Port: Network access port number, must be greater than 2000.

Mask: Sub net mask.

Gateway: The gateway IP is used to communicate in different network segments

Http Port: The port is for IE browser. The default value is 80. It can be modified.

5.13.2 Network Advanced Settings

NIC type: Default is “10M/100M Auto”, the other options are: 10M Half-Dup, 10M Full-Dup, 100M Half-Dup and 100M Full-Dup.

IP Server[1]: If DVR uses PPPoE function, and get one dynamic IP address. If you set IP server with one fixed Internet IP, DVR will send some information such as DVR name, DVR serial number, DVR current IP to that fixed IP address. We call that fixed Internet IP as IP server. The IP server with that fixed Internet IP can receive DVR information and used to resolve DVR dynamic IP.

Multicast IP: It is one D-class IP address, among 224.0.0.0 --- 239.255.255.255. If you do not use multicast function, you do not need to set the Multicast IP.

Remote Host IP and Port: If you set this IP and port and enable “Upload to Center” option, when there is alarm and exception alarm occurs, DVR will send information to that host IP. The Client center with this IP can receive alarm and exception information from DVR.

5.13.3 DHCP Function

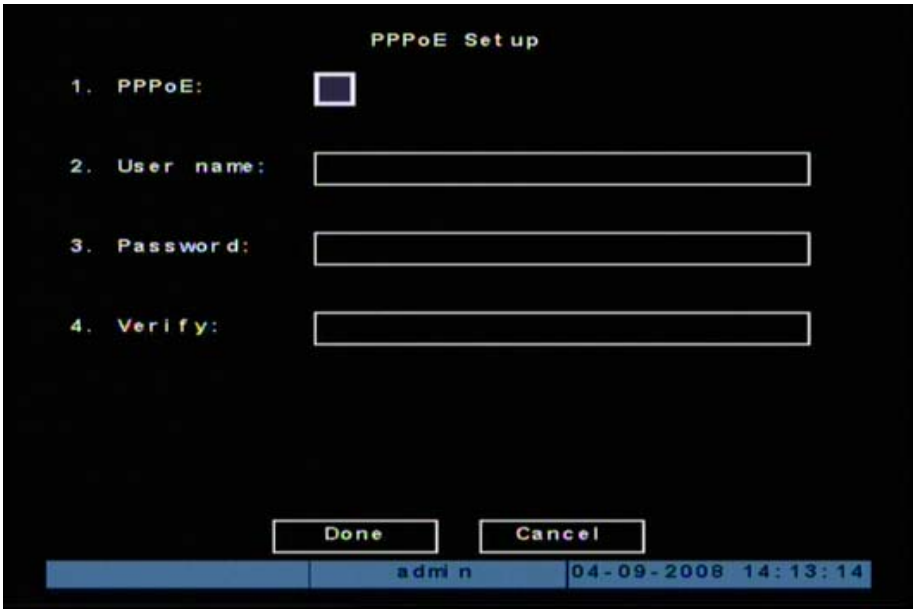
In DVR “Network” menu, if you set the IP as “0.0.0.0”, save and reboot DVR, in reboot process, DVR will search the DHCP server and get one dynamic IP address. This box will

[1] IP server is an application software. Not delivered with standard package.

display the dynamic IP address obtained from DHCP server.

5.13.4 PPPoE Function

Enter into DVR “Network” menu, press “PPPoE” setup menu:



Step 1: Enable “PPPoE” option

Step 2: Input PPPoE username provided by ISP

Step 3: Input PPPoE password provided by ISP

Step 4: Input PPPoE password again

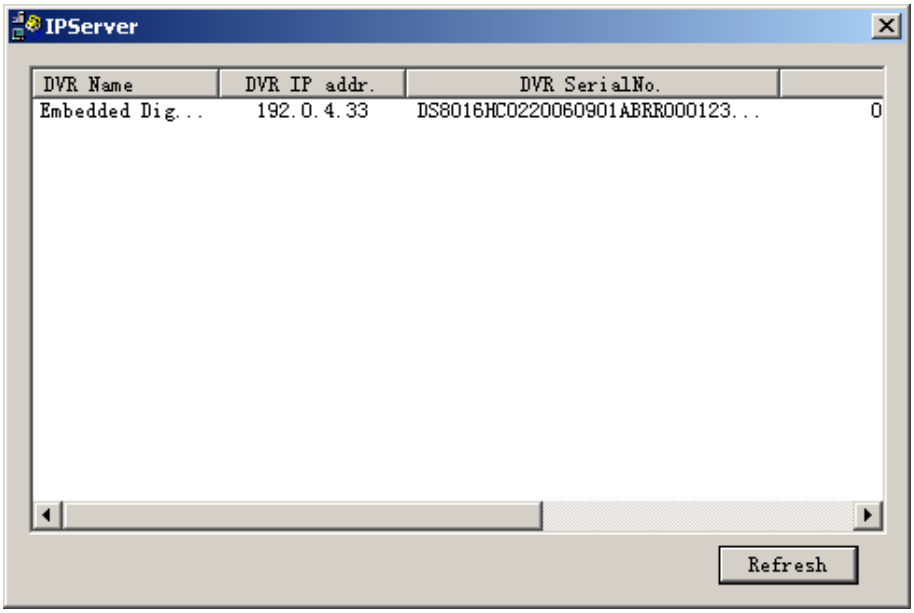
Step 5: Save parameters. In “PPPoE” menu, press **[**Done**]** to exit to the previous menu, press **[**Done**]** again in “Network” menu to save the setting. Reboot DVR to make parameters into effect. In reboot process, DVR will start dialup using PPPoE parameters. If DVR dialup internet successfully, DVR will display the dynamic internet IP address in “Network” menu.

5.13.5 IP Server Solution for DHCP

If DVR uses PPPoE function, and get one dynamic Internet IP address. If you set IP server with one fixed Internet IP in DVR Network advanced settings, DVR will send some information such as DVR name, DVR serial number, DVR current IP to that fixed IP address. We call that fixed Internet IP as IP server. The IP server with that fixed Internet IP

can receive DVR information and used to resolve DVR dynamic IP.

IP server is one software run on the computer; The following figure illustrate the typical window of the IP server software. You may develop your own IP server SW to fit your particular project needs based on the DVR SDK.

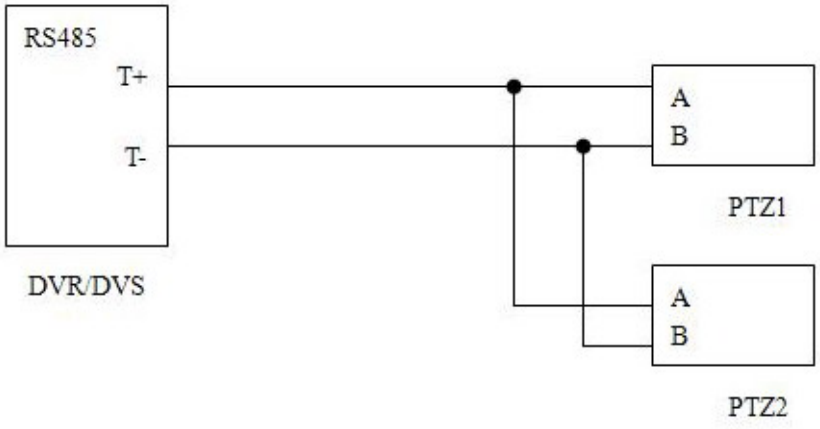


5.14 PTZ Setup

The RS-485 port at DVR rear panel is reserved for PTZ camera control.

5.14.1 Typical PTZ Connection

The below figure illustrate a typical PTZ camera connection with DVR.



Connect DVR RS-485 port Pin “T+” with PTZ Pin “A”.
Connect DVR RS-485 port Pin “T-“with PTZ Pin “B”.

5.14.2 PTZ Settings

Please make sure RS-485 parameters setting is match to the PTZ protocol[1]. In main menu, move “Active Frame” to “PTZ” and press **[**ENTER**]** key, you can see the PTZ setting windows as below:

PTZ menu description

Select channel: Select one PTZ camera.

RS-485 parameters: Including baud rate, data bit, stop bit, parity, flow control, etc. These

[1] Refer to PTZ camera manufacturer’s instruction for details.

parameters must be the same as those of PTZ protocol.

PTZ address: Set PTZ camera address.

Protocol: DVR had the following PTZ protocol: TYCO_AD422, Pelco-p, Pelco-D, Samsung, Panasonic, infinova, YouLi, LinLin-1016, LinLin-820, DM DynaColor, HD600, JC-4116, Pelco-d WX, VCOM VC-2000, NetStreamer, SAE/YAAN, Kalatel-312, CELOTEX, TLPelco-p, TLHHX-2000, BBV, RM110, KC3360S, ACES, ALSON, INV3609HD, Howell, Tc Pelco P, Tc Pelco D, AUTO-M, AUTO-H, ANTEN, CHANGLIN, DeltaDome, XYM-12, ADR8060, EVI-D30, DEMO-SPEED, DM-PELCO-D, ST832, LC-D2104, HUNTER, A01, TECHYIN, WEIHAN, LG, D-MAX, KTD-348, PIH-7625, LCU, DennarDome, etc.

5.14.3 PTZ Control

In “Preview” mode, press [PTZ] button on IR, you can enter into PTZ control mode.

Use jog shutter or **[↑]/[↓] [->]/[<-],** DVR will check PTZ protocol and send corresponding PTZ control commands through RS-485 port.

5.14.4 Preset Setup[1]

Preset is using one number to represent the camera’s position, zoom, focus and iris. Move “Active Frame” to “PTZ-Advanced Setting-Preset” press **[**ENTER**]** key to enter into preset setting window. You can save up to 128 preset numbers. Please make sure the PTZ support preset function before you setup preset.

[1] Feature may vary on different PTZ cameras, refer to manufacturer’s instruction for details.

Add preset number: You can input preset number (among 1-128) in the edit box. Then press **[**Setting**]** button to enter into PTZ control interface. In PTZ control interface, you can use direction keys to adjust PTZ position, and use **[**IRIS+**] [**IRIS-**] [**FOCUS+**] [**FOCUS-**] [**ZOOM+**] [**ZOOM-**]** keys to adjust iris, focus and zoom. Press **[**ENTER**]** and press **[**Save**]** button to save the preset. You can repeat this step to setup new presets.

After you setup all preset numbers, press **[**Return**]** button to return "PTZ" menu. In "PTZ" menu, press **[**Done**]** button to save all settings.

Delete preset number: In "Preset" setup menu, input one preset number, press **[**Delete**]** button, and you've deleted this preset number.

After deleting, press "Return" button to "PTZ" menu. In "PTZ" menu, press **[**Done**]** button to save all changes.

Please make sure the PTZ camera you are using supports preset function.

5.14.5 Sequence Setup[1]

Each sequence is made up of several cruise points. Each cruise point includes one preset number, dwell time and dwell speed. Please make sure the PTZ you are using can support sequence function before you start to setup. You can save to 16 sequences.

[1] Feature may vary on different PTZ cameras, refer to manufacturer's instruction for details. Tyco will only provide technical support for Tyco SpeedDome Ultra & Optima series.

In “PTZ” menu, press “Setup” button on the right side of “Sequence No” item, you can enter into “Sequence” setup menu:

In “Sequence” setup menu, you can input the sequence number.

If you use Tyco SpeedDome, you should go to SpeedDome menu to set the Sequence, and only SpeedDome Ultra 7 and later version supports recall on Sequence.

After you finish setup the sequence, press “StartSeq” to check the current sequence setting. Press “StopSeq” button to stop.

Press **[**Return**]** button back to “PTZ” menu. In “PTZ” menu, press **[**Done**]** to save all settings.

Please make sure the PTZ cameras you are using can support sequence function.

5.14.6 Pattern Setup[1]

A Pattern is a series of programmed pan/tilt/zoom dome movements. Please make sure the PTZ cameras you are using support patterns function.

In “PTZ” menu, press ““PTZ-Advanced Setting-Pattern” to enter into “Pattern” setup menu:

Press **[**Rec Pat**]** button, you will enter into “PTZ control” interface. You can start controlling PTZ to record the pattern, press **[**ENTER**]** to save the track and return to “Cruise” setup menu. Press **[**Start Pat**]** button to repeat the PTZ track until you press **[**Stop**]** button. Note: Only TYCO_AD422 protocol supports pattern recording. (Please double check the max. # of patterns.)

Press **[**Return**]** button back to “PTZ” menu. In “PTZ” menu, press **[**Done**]** button to save all settings.

[1] Feature may vary on different PTZ cameras, refer to manufacturer’s instruction for details. Tyco will only provide technical support for Tyco SpeedDome Ultra & Optima series.

5.15 Exceptions Setup

The exceptions alarm includes the followings: hard disk full, hard disk error, illegal access, IP address conflict, network failure, and NTSC/PAL differ.

Enter into DVR “Alarms” menu, move active frame to “Exceptions” and press **[**Enter**]** to enter into exception menu.

In case of exceptional alarm, you can set the handling methods in below:

Upload to Center: Send exception information to center host PC.

Trigger Alarm Output: trigger local relay output.

You can select more than one handle methods.

After you finish setup, press **[**Done**]** key to save settings or press **[**ESC**]** key to abort.

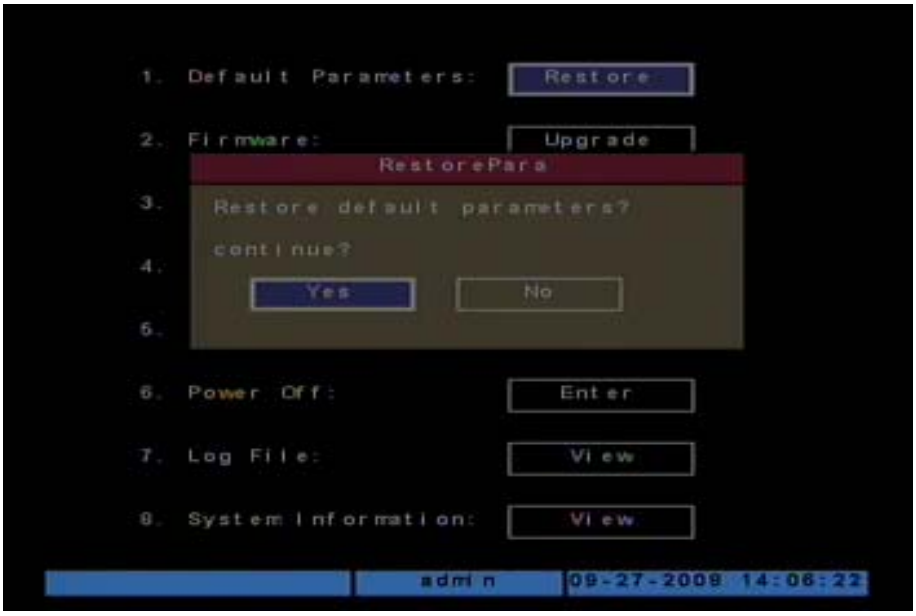
Chapter6 Utilities

“Utilities” menu provides many useful features of the DVR.

The “Utilities” setting window is shown in below:

6.1 Restore Parameters

Restore factory default parameters for DVR. Please note the IP address, gateway and port number can not be restored.


1. Default Parameters:
Restore
2. Firmware:
Upgrade
RestorePara
3.
Restore default parameters?
continue?
4.
Yes
No
5.
6. Power Off:
Enter
7. Log File:
View
8. System Information:
View
admin
09-27-2009 14:06:22

6.2 Hard Disk Management

HDD status

Display the Hard Disk Capacity, Free space, Idle, status.

Format HDD

Please make sure you stop all recording before run the format. Reboot the unit after format.

6.3 Clear Alarm Out

Reset the alarm output manually.

6.4 Reboot

Manually reboot the DVR.

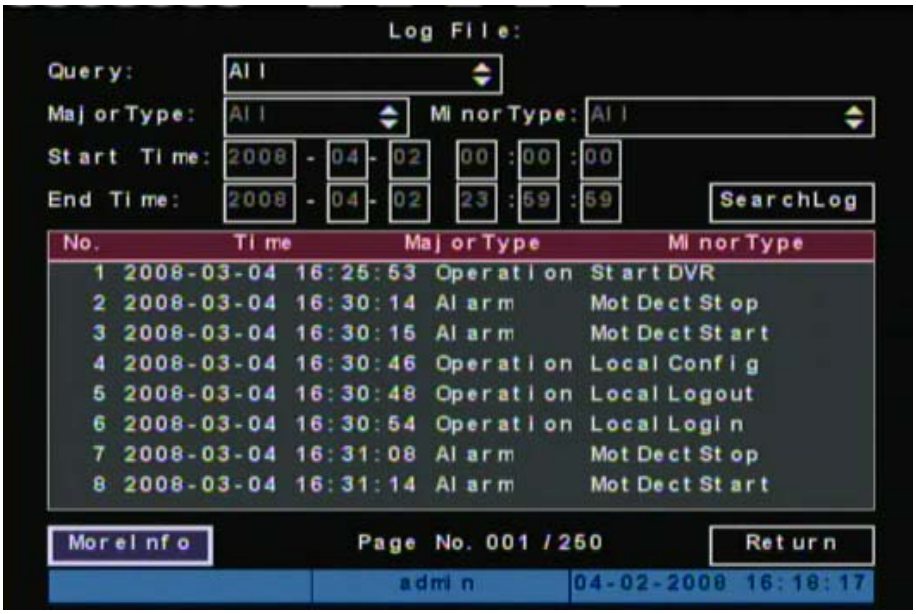
6.5 Power Off

Shut off the DVR.

6.6 View Log

To view log file of the DVR.

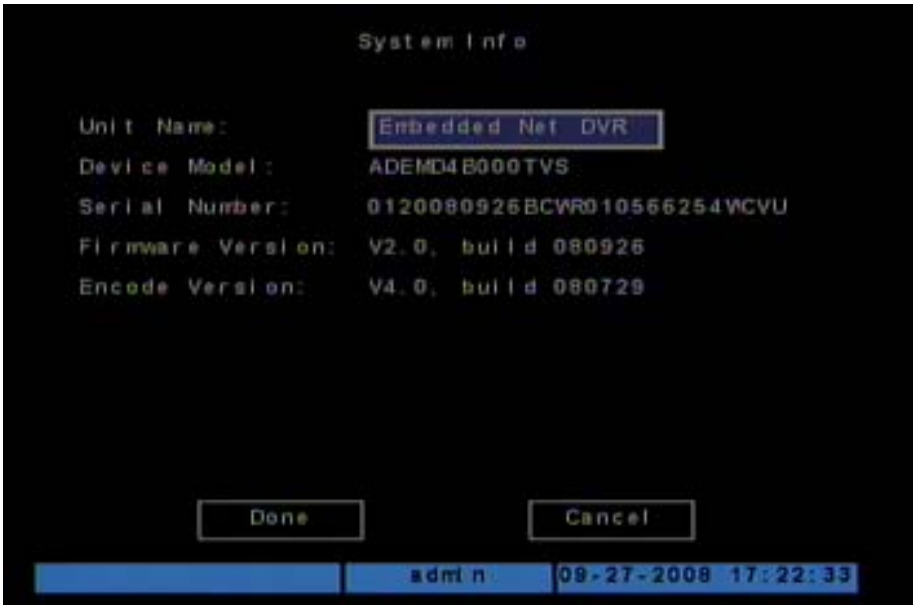
In “Utilities” menu, press “View Log” to enter into “Log” menu:


Log File:
Query: All
MajorType: All
MinorType: All
Start Time: 2008 - 04 - 02 00 : 00 : 00
End Time: 2008 - 04 - 02 23 : 59 : 59
SearchLog
No. Time MajorType MinorType
1 2008-03-04 16:25:53 Operation StartDVR
2 2008-03-04 16:30:14 Alarm MotDectStop
3 2008-03-04 16:30:15 Alarm MotDectStart
4 2008-03-04 16:30:46 Operation Local Config
5 2008-03-04 16:30:48 Operation Local Logout
6 2008-03-04 16:30:54 Operation Local Login
7 2008-03-04 16:31:08 Alarm MotDectStop
8 2008-03-04 16:31:14 Alarm MotDectStart
MoreInfo
Page No. 001 /250
Return
admin
04-02-2008 16:18:17

If you want to view the log based on default option, just press **[**ENTER**]** key. DVR will list all matched information. You may also search the log files by different criteria and time period.

6.7 System Information

Display the system information includes unit name, model, serial #, firmware version etc.



Chapter7 Firmware Upgrade

7.1 Upgrade from USB Flash

In DVR “Utilities” menu, click firmware “Upgrade” button, in the popup dialog box:

You can select either upgrade via FTP mode or USB mode. If you select USB mode, please make sure that firmware file is placed in USB FLASH root directory, and USB FLASH should be FAT32 file system.

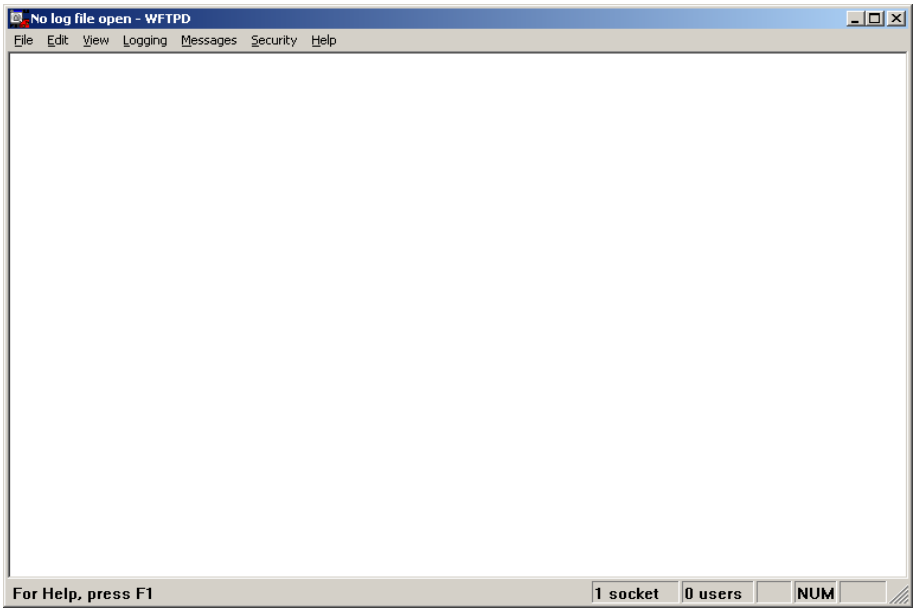
Press **[**USB**]** button, DVR will search corresponding firmware file from connected USB FLASH, and update firmware. After upgrading successfully, please reboot the DVR as prompted.

7.2 Upgrade from FTP Server

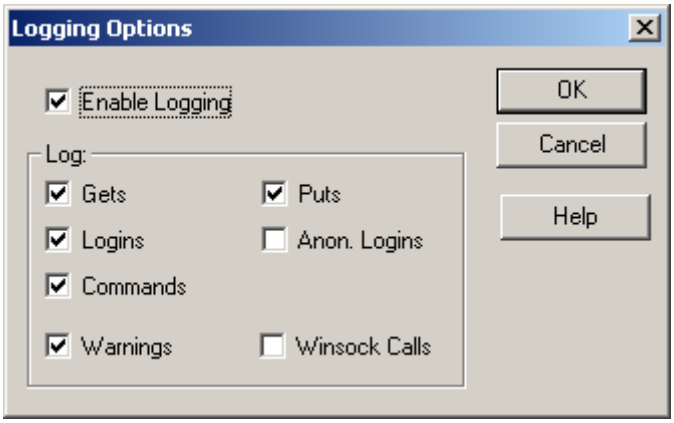
7.2.1 FTP Server Setup

FTP server software can be found on the CD. Please follow the steps below to setup the software:

Step 1: Run wftpd32.exe (FTP server software).

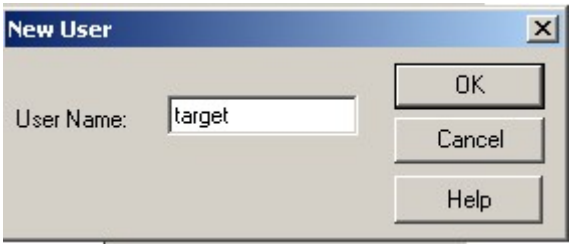


Step 2: Select “Logging” in the menu，choose Log Options in the sub menu, and make selection as following:

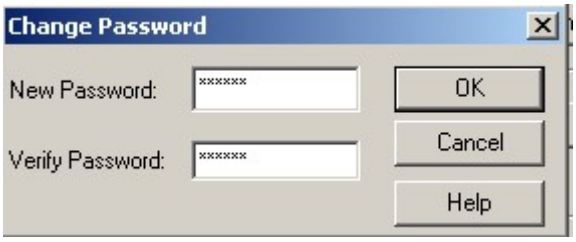


Step 3: Select “Users/rights” under “Security” menu item. The following dialog box will be pop-up.

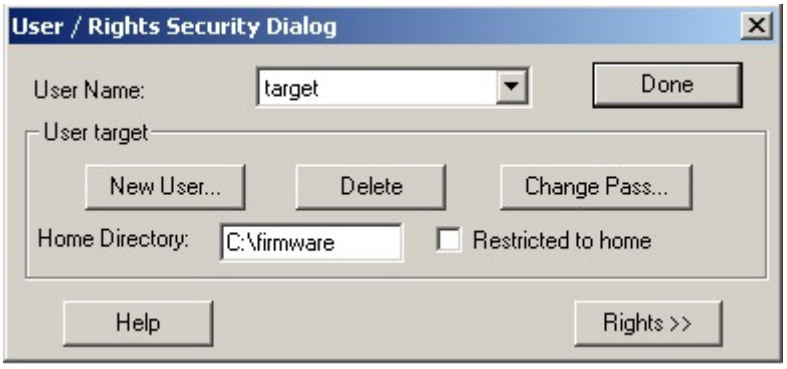
Step 4: Create new user: Click “new user’. New user dialog pops up. Input user name “target”. Click “OK”.



Step 5: In the password dialog, input password “target” in “New Password” and “Verify Password” edit box. Click “OK” to save and exit the dialog box.



Step 6: In the “User/Rights Security” Dialog, select “User Name” as “target”. In “Home Directory” edit box, input the path where the firmware file (digicap.dav) is placed. Then press “Done” to exit.



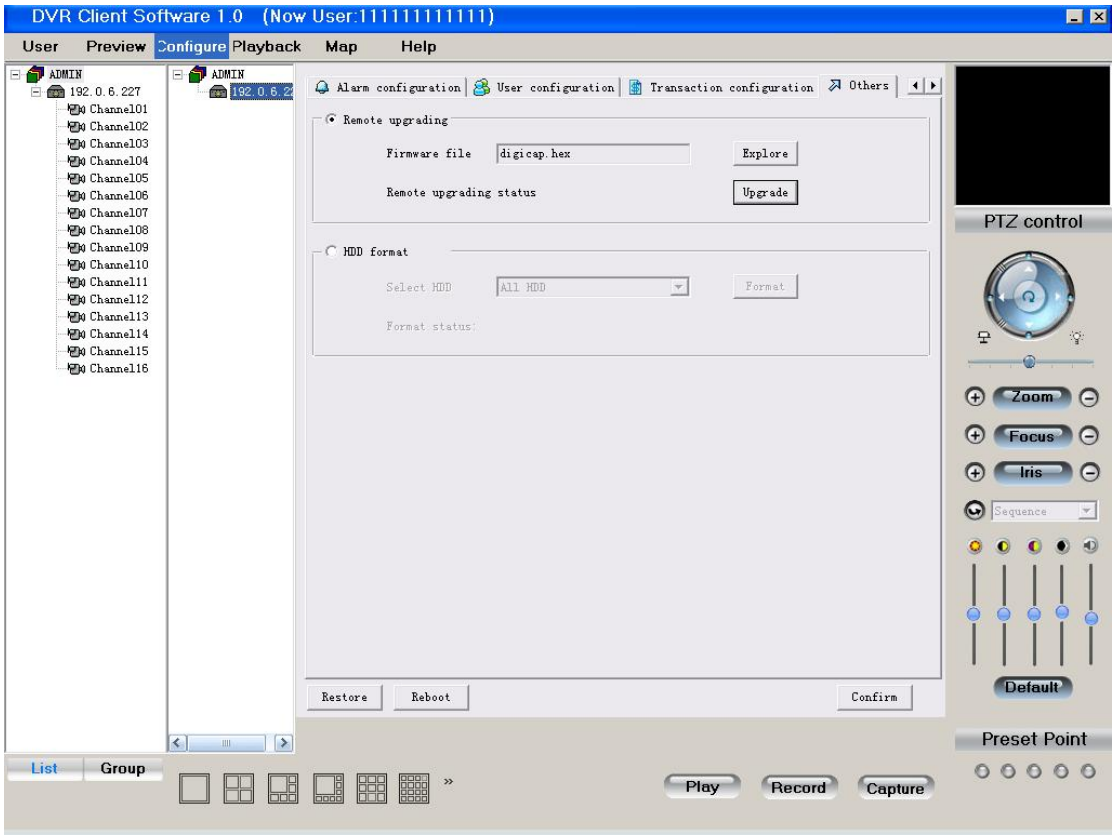
7.2.2 Use DVR FTP Upgrade Function

Select **[**FTP**]** function under the “Upgrade” sub menu. You need one host PC to run FTP server software and place firmware file (digicap.dav), and make sure DVR and PC are in the same sub net, input FTP server IP and press **[**ENTER**]**.

Upgrading will start and prompt to reboot the device once the process is done.

7.3 Use Client Software to Upgrade

You can use client software to upgrade, please refer to user manual of client software for how to configure the DVR and some other configurations, then enter the menu “configuration” → ”remote config” → ”others”, press explore to import the path of firmware “digicap”, click “Upgrade” to start to upgrade.



Appendix A HDD Capacity Calculation

Please use the below formula to calculate total HDD capacity needed for the DVR according to video recording requirement (Recording resolution and Time period).

Step 1: Use the Formula (1) to calculate storage capacity q_i that is the capacity for one camera/hour, in unit Mbyte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

In the formula: d_i = Bit rate, unit Kbit/s

Step 2: Based on the requirement on "Recording Time", use the Formula (2) to calculate the storage capacity m_i, in unit Mbyte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

In the formula:

h_i = Recording time for each day (hour)

D_i = Number of days for which the video shall be kept

Step 3: Use the Formula (3) to calculate total capacity (accumulation) q_T that is needed for all channels in the DVR during **scheduled video recording**.

$$q_T = \sum_{i=1}^{c} m_i \quad (3)$$

In the formula:

c = Total number of cameras in one DVR

Step 4: Use the Formula (4) to calculate total capacity (accumulation) q_T that is needed for all channels in DVR during **alarm video recording (including motion detection)**.

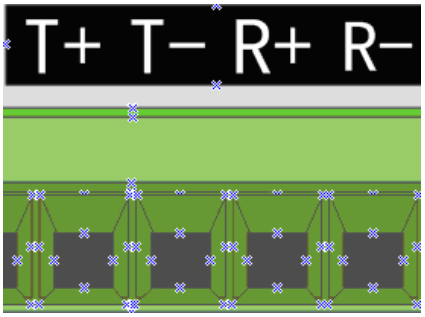
$$q_T = \sum_{i=1}^{c} m_i \times a\% \quad (4)$$

In the formula: *a%* = alarm occurrence rate

Appendix B DVR Connector Definition

1 RS485 Connection

RJ45 introduction



Pin definition

To make the connect cable according the follows.

T+, T- = TXD+, TXD-

R+, R- = RXD+, RXD-

2 UTP Network Connection

Pin definition

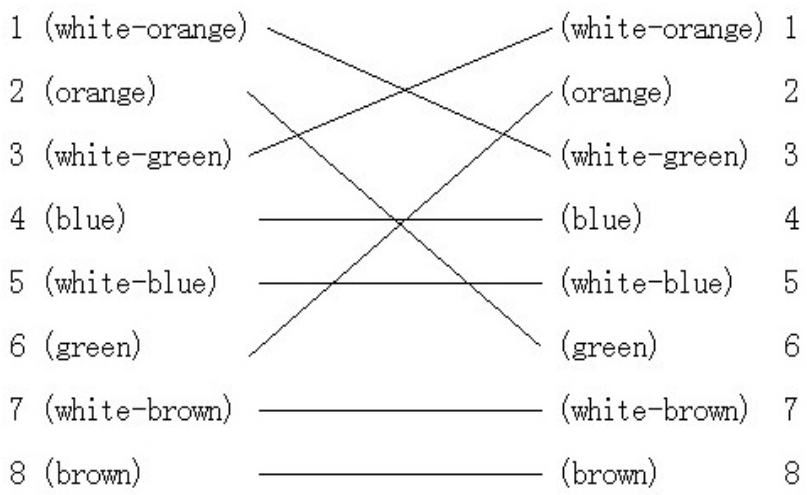
To make the network cable according to the actual situation, there are two options:

(1) Connect via a hub/switcch

1 (white-orange)	———	(white-orange) 1
2 (Orange)	———	(Orange) 2
3 (white-green)	———	(white-green) 3
4 (blue)	———	(blue) 4
5 (white-blue)	———	(white-blue) 5
6 (green)	———	(green) 6
7 (white-brown)	———	(white-brown) 7
8 (brown)	———	(brown) 8

Standard Ethernet Patch Cable

(2) Connect directly to PC



Ethernet Crossover Cable

Appendix C Specifications

Model Name	ADEMD4B000TV	ADEMD4B000TVS
Video compression	H.264	
Preview resolution	PAL: 352*288 (CIF), NTSC: 352*240 (CIF)	
Playback resolution	PAL: 352*288 (CIF), NTSC: 352*240 (CIF)	
Video input	4-ch BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)	
Composite video output	1-ch, BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)	
Spot video Output	1-ch, BNC (Electrical Level: 1.0Vp-p, resistance: 75Ω)	
Max frame rate	PAL: 25FPS, NTSC: 30FPS	
Audio compression	OggVorbis 16Kbps	
Audio input	1-ch RCA (Electrical Level: 2.0Vp-p, Resistance: 1000Ω)	
Audio output	1-ch RCA (Linear Electrical Level, Resistance: 600Ω)	
Stream type	Video/Video&Audio	
Max bit rate	32Kbps--2Mbps, self-define	
HDD IDE interface	1 SATA interface, support 1 SATA HDD (2000GB maximum)	
Network interface	1 RJ45 10M/100M Self-adaptive Ethernet Interface	
USB interface	1 USB2.0, can support USB memory/HDD, USB CD/DVD burner	
VGA interface	No	1 VGA interface, support resolution: 800×600/60Hz, 1024×768/60Hz, 1280 ×1024/60Hz
External alarm in	4	
Relay output	1	
PTZ control	T+, T-, R+, R-	
Voice talk	Same as audio input and audio output	
Dual stream	Yes	
Power supply	DC 12V	
Power consumption	Less than 10W (without HDD)	
Working temperature	-10℃--＋55℃	
Working humidity	10％--90％	

Size	315mm x 230mm x 45mm

Appendix D Quick Reference

Type	Name	Description	Index
Safety	User management	Create and delete users. System has one default administrator. The administrator can create 15 users and define their rights.	5.1
	Password Management	Modify password.	5.1
HDD recording	HDD management	Format HDD, HDD information.	6.2
	Recording mode	Manual record, All time record, Motion detection record, Alarm record, Motion and Alarm record, Motion or Alarm record.	5.11
	Recording parameters.	Bit rate, Frame rate, Image quality, etc	5.11
	Playback	Playback by time, Playback by file. Fast, Slow, Pause, Frame by frame.	4.6
	Backup	Backup record files and video clips.	4.7
Local monitoring	Preview mode	Monitor and VGA display. 1 screen/4 screen preview mode. Auto switch or manual switch.	5.10
	PTZ control	Control pan, tilt, zoom, focus and iris. Setup and adjust preset, sequence and cruise.	4.4 5.14
	Motion detection	Motion detection area, sensitivity and response policy setup.	5.9
	Alarm input	Alarm input response policy, schedule setup.	5.12
	Relay output	Alarm output parameters setup.	5.12
	Mask	Sensitive mask area setup.	5.6
	View tampering	Camera spiteful block setup.	5.7
	Exceptions	Exception response, such as HDD error, HDD full, illegal access, etc.	5.16
Network	ASDL	Use PPPoE dialup function, support DNS.	5.13.4
	Preview	TCP, UDP, RTP, Multicast.	*
	Control	Control DVR through network.	*
	Alarm	Send alarm information to host PC through network.	*
	PTZ control	Remote control PTZ.	*
	Remote setup	Remote setup DVR parameters.	*
	Remote record	Remote record real time stream.	*

	Remote playback	Remote playback the recorded files in DVR	*
	Download	Download recorded files in DVR.	*
	Remote upgrade	Remote upgrade firmware.	*
	Web	Using IE to access DVR	*
Utilities	OSD	OSD setup	5.4, 5.5
	LOGO	Logo setup	5.4, 5.5
	View log	View log	6.6
	Voice talk	Two way voice talk or one way voice broadcast	*

Appendix E Troubleshooting

Failure	Possible reasons
"POWER" light in front Panel does not turn on, and fan does not work.	1) Power cable is broken. 2) Power supply is broken.
DVR continuously reboots after start up every 10 seconds.	1) Upgraded the wrong firmware 2) Failure on Compression board 3) Failure on main board.
No video out from DVR. (VOUT)	1) The cable connected with the monitor is broken. 2) Failure on DVR rear panel. 3) Failure on main board.
Cannot find the hard disk in reboot process.	1) Hard disk cable is connected or broken. 2) Power cable of hard disk is not connected or broken. 3) Hard disk is broken.
DVR can not control PTZ through RS-485 port.	1) RS-485 cable is not connected correctly or broken. 2) PTZ parameters are not correctly set. 3) RS-485 port of DVR is broken.
Can not view DVR live image via client software.	1) Network connect is down. 2) DVR is not properly programmed on client software.
	3)

Product specification subjects to change without notice.

Certain product names mentioned herein may be trade names and / or registered trademarks of other companies.